ACCOUNTING CONFERENCE NUMBER

EDISON ELECTRIC INSTITUTE BULLETIN

TECHNOLOGY DEPT.

NOVEMBER, 1939

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EDISON ELECTRIC INSTITUTE

THE ELECTRIC LIGHT AND POWER INDUSTRY

Current Statistical Data Covering 100 Per Cent of Industry

DURING THE MONTH OF SEPTEMBER

	1939	1938	%
		SOURCE OF ENERGY	
Kilowatthours Generated (Net)			
By Fuel Burning Plants	7,732,963,000	6,146,338,000	+25.8
By Water Power	2,761,606,000	3,187,695,000	−13.4
Total Generation	10,494,569,000	9,334,033,000	+12.4
Net Purchases			
From "Other Sources"	336,802,000	330,544,000	+ 1.9
Net International Imports	110,993,000	102,092,000	+ 8.7
Total Purchased Power	447,795,000	432,636,000	+ 3.5
Total Input	**10,942,364,000**	**9,766,669,000**	**+12.0**
		DISPOSAL OF ENERGY	
Total Sales to Ultimate Customers	**9,273,814,000**	**8,190,226,000**	**+13.2**
Company Use, Etc.			
Use in Electric Railway Department	28,838,000	27,741,000	+ 4.0
Used in Electric and Other Departments	133,441,000	143,704,000	− 7.1
Furnished Free or Exchanged in Kind	4,980,000	1,554,000	.....
Total Company Use, Etc.	167,259,000	172,999,000	− 3.3
Total Energy Accounted For	**9,441,073,000**	**8,363,225,000**	**+12.9**
Losses and Unaccounted For	1,501,291,000	1,403,444,000	+ 7.0
Total Output (To Check Above **"Input"**)	**10,942,364,000**	**9,766,669,000**	**+12.0**
		CLASSIFICATION OF KILOWATTHOUR SALES	
Residential or Domestic	1,754,744,000	1,616,735,000	+ 8.5
Rural (Distinct Rural Rates Only)	(Allocated to Other Classes)		.....
Commercial and Industrial			
Small Light and Power (Retail)	1,761,291,000	1,583,694,000	+11.2
Large Light and Power (Wholesale)	4,907,249,000	4,200,635,000	+16.8
Public Street and Highway Lighting	148,895,000	140,533,000	+ 6.0
Other Public Authorities	223,903,000	208,683,000	+ 7.3
Street and Interurban Railways	296,335,000	293,699,000	+ 0.9
Electrified Steam Railroads	149,428,000	113,783,000	+31.3
Interdepartmental	31,969,000	32,464,000	+ 1.5
Sales to Ultimate Customers	**9,273,814,000**	**8,190,226,000**	**+13.2**
		ESTIMATED REVENUE	
Revenue from Ultimate Customers	$196,844,900	$183,712,900	+ 7.1
Other Electric Revenue	2,102,000	2,234,700	− 5.9
Total Revenue	$198,946,900	$185,947,600	+ 7.0
		RESIDENTIAL OR DOMESTIC ELECTRIC SERVICE— 12 MONTHS ENDED SEPTEMBER 30th	
Kilowatthours per Customer	886	841	+ 5.4
Average Annual Bill	$36.41	$35.91	+ 1.4
Revenue per Kilowatthour	4.11¢	4.27¢	− 3.7

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EDISON ELECTRIC INSTITUTE BULLETIN

Volume 7 NOVEMBER, 1939 No. 11

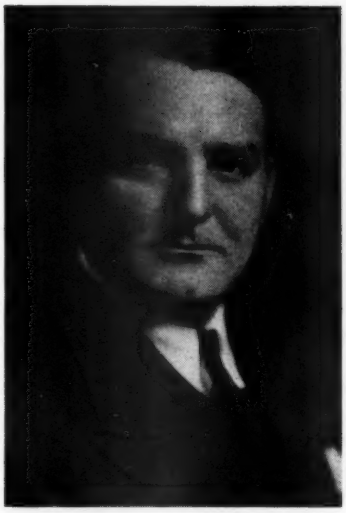
The Third National Accounting Conference

THE Third National Accounting Conference held on November 13, 14, and 15, at the Edgewater Beach Hotel in Chicago, will probably go down in history as the most successful of gatherings of its character to date.

Without question, no program has ever been planned and carried out which contained so many outstanding speakers in the history of accounting research and endeavor. Between 50 and 60 formal and semi-formal papers were delivered at the various committee group meetings, the dinner session, and the general sessions held on Tuesday and Wednesday mornings. The quality of the papers showed unusual research and care in preparation and they will be read and reread all over the Nation for some time to come.

The actual attendance at the Conference will never be known. The official registration shows in excess of 500 delegates coming from 36 states in the Union, but obviously many were in attendance who neglected to register. It was also most encouraging to see the substantial representation from the Far West and the Southern states. In addition, there were several representatives from various provinces in Canada. Among them were British Columbia, Ontario, Saskatchewan, and Manitoba. Mexico was also represented. A scrutiny of the registration list indicates that the attendance included more accounting officers and leaders in accounting thought than have ever been heretofore assembled in a similar meeting. A most pleasing feature of the Conference was the enthusiasm and interest displayed by the delegates and their conscientiousness in attending all of the meetings.

Starting Monday morning at 10:00 a.m., the delegates descended upon the open committee group meetings in such number that the capacity of two of the rooms was soon exhausted. While the



BERNARD S. RODEY, JR.
Chairman, General Accounting Committee, E.E.I.

Plant Accounting and Records Committee and the Depreciation Committee held closed sessions during the morning period, they were fully attended by their members.

During the afternoon sessions on Monday and Tuesday, at which time all of the group meetings were open to all the delegates, attendance at these sessions approximated: Plant Accounting and Records Committee—250, Customers' Relations, Commercial Accounting and Collections Committee—175, Classification of Accounts Committee—150, Purchasing, Stores, and Transportation Committee—125, Depreciation Committee—100.

In filling out registration cards, the attending delegates were requested to indicate specialized accounting interests in the space provided. Since no limitation was placed on the number of interests to be specified, these ranged from "none" in a few cases to "all" in the case of about ten per cent of the total. Excluding the group which indicated an interest in all phases of the accounting items listed, over one thousand votes were cast in answer to the request "Please indicate below the phase of accounting in which you are engaged or in which you have a special interest at this Conference." A breakdown of the requests follows: Depreciation, Plant Accounting, Continuing Property Records—247; Accounting Methods and Procedures—150; Classification of Accounts and Interpretations—140; General Books and Financial Statements—104; Customers' Relations, Commercial Accounting and Collections—97; Operating Expenses—68; Internal and External Auditing—68; Taxes and Insurance—63; Purchasing, Stores and Transportation—63; Accounts Receivable, Payable, Miscellaneous Billing—40; Miscellaneous—9.

In addition to the planned group meetings and the general sessions, numerous small group meetings were held spontaneously throughout the Conference. These included the special 3 per cent Tax meeting, an unofficial meeting of many of the members of the General Accounting Committee, and numerous others regarding which your reporter has been unable, to date, to obtain information. It is a safe contention that no thought and idea exchanging machinery has ever before been so thoroughly prepared and so smoothly put in action.

Tuesday, General Sessions

The Tuesday general sessions meeting opened shortly after 9:30 a.m. Under the leadership of Messrs. Walter C. Lang and his co-presiding officers G. U. Stewart and C. E. Kohlhepp an extensive program was brought to a successful conclusion by 1:30 p.m.

The opening remarks by the Chairman of the General Accounting Committee, Mr. B. S. Rodey, Jr., were brief. He expressed the hope that the delegates

present would find the program that had been planned for them constructive and interesting, commended the Planning Committee and his associates of the staff for their efforts, and concluded by voicing satisfaction with the arrangement of having the general sessions program conducted by so able a group on Tuesday, and by Mr. Herman L. Gruehn and his co-presiding officers, Mr. F. B. Flahive, Mr. J. M. Kramarsik, and Mr. J. H. Lobban, on Wednesday. He then turned the gavel over to Mr. Lang who introduced Mr. Bernard W. Lynch, President of the Standard Gas and Electric Company, who formally welcomed the delegates and also gave them a very constructive message concerning their work. (This address appears in full elsewhere in this issue.)

Mr. F. B. Flahive, Chairman of the Accounting Section of the American Gas Association, paid his compliments to the presiding officers and to the delegates present, and made a plea for cooperative work among the accountants of the Industry, stating that the status of the accountants in Industry and his position before his management and the public had improved greatly during the past few years due largely to combined efforts of the Edison Electric Institute, The American Institute of Accountants, The Controller's Institute of America, and last but not least the association he had the honor of being associated with in a leading capacity this year, The American Gas Association. He pointed out that regardless of the competitive nature of some of the business enterprises which we may represent, there is one interest that is common to us all and that is *accountancy*. It mattered little, he thought, what form the cooperative endeavor followed, joint committees, interchanges of data and information, or otherwise. He concluded that what was important is that the *will* to go ahead together in the improvement of the standards of our profession continue to be our chief aim and ambition because together we are strong and our capacity to accomplish results unlimited, but apart we are weak and progress is slow.

Mr. J. V. Cleary, Chairman of the Plant Accounting and Records Committee presented a brief report and paper concerning possible economies in the plant accounting and records field under the title of "Streamlining Plant Accounting Operations." He stated that it was probably needless to say simplification should be effected, since everyone engaged in plant accounting had already been told by his bosses that the costs for this work were excessive. It was then not a case of whether there should be simplification but rather a determination of how it could be achieved. With certain of the basic determinations completed, it now appeared to be an appropriate time in which to review the overall situation so as to establish proper routines for current operations. The speaker termed this process "Streamlining Plant Accounting Operations." He stated that it might be found that a literal interpretation of various provisions of the regulatory orders had resulted in compiling data which were already available in possibly simpler form from an existing record, or that the elaborate records necessary to supply certain information having a limited value could not be justified when measured in the light of the benefits obtained. In investigating this possibility of duplication of records, it was not sufficient to limit the review to the Accounting Department. Mr. Cleary stated that that record was to be maintained which would supply the information required by all concerned in the quickest, most accurate and most economical manner. In connection with this matter of duplication of records, the use of identical records in two departments for different purposes was not necessarily a needless duplication. He seemed to feel that the greatest possibilities for economies were in the field of transmission and distribution records. He suggested the more extensive use of an increased limitation on standard orders for minor recurring distribution work. He also advocated the use of the so-called manhour rates providing for establishment of overall average labor rates for the entire construction department. The average rate to include in addition to employees' salaries, lost time, vacations, permits, tools, building service, and other costs formerly classified as indirect costs. He concluded with the warning that no attempt be made to have the records serve too many purposes, because a record which served one or two purposes well, would fall under its own weight if overburdened.

Mr. Will-A. Clader whose paper appears in this issue then presented some interesting viewpoints and opinions regarding the responsibilities of accountants in connection with the maintenance of continuing property records.

This paper was followed by one entitled "An Engineer's Comments on the Control of Continuing Property Records" prepared by H. R. Martz, Vice-President of Day & Zimmermann, Inc., and presented by Mr. George M. Vesselago of that organization. It appears also in the current issue.

A brief but comprehensive report was submitted by Mr. K. C. Campbell, Chairman of the Purchasing, Stores and Transportation Committee. Among other things he stated that while it was true that there had been great progress made as regards accounting practices within the scope of his Committee, they were alive to further possibilities for betterment. There was no better way to accomplish this than by a free interchange of ideas with other companies. The contacts formed by these Conferences were invaluable in this respect for those in this line of work who did not have the opportunity to visit other companies. He called attention to the adequacy of the newer systems of supply accounting which afforded a complete tie-in of stores with the general books. He said further that in case of an audit, it was possible to check any location, any class of stock or any item directly with the general books more thoroughly than with any previous system. Due to occurrences several months ago implicating the materials and supplies account of a large company in another industry, the facilities now afforded for the auditing of stores were given more careful consideration in many industries which formerly considered this as a mere matter of routine.

The speaker next presented was Captain A. H. Mayo, Planning Officer of the Bureau of Supplies and Accounts of the U. S. Navy. Captain Mayo's paper appears in the present issue.

A short but interesting report was then given by Mr. L. A. Mayo, Chairman of the Customers' Relations, Commercial Accounting and Collections Committee, who spoke on "Public Relations and Accounting Mechanics." Mr. Mayo stated that a sound company policy must recognize that a definite relationship exists between good public relations and efficient accounting mechanics. These two functions are so closely interwoven that, if one is emphasized at the expense of the other, this relationship is unbalanced and poor overall results are likely to follow. Every contact or transaction with customers affects the public relations of a utility one way or another. Such contacts usually occur either in a company office or over the telephone. Perhaps it is a conversation

in a customer's home with a meter reader or collector. It may be the amount of the bill just received that prompts the customer to ask questions. Regardless of origin or nature, customers are demanding and expect more information from utilities than they did years ago. The accountant's efforts should begin with the employment of people who can be developed to handle public relations as well as accounting activities. Such employees should be selected not only for their accounting training and experience but also for their personality, appearance, and indicated ability to handle customers or people. These requisites are particularly important in employees making up the supervising forces—as well as in cashiers, contact clerks, telephone operators, meter readers and collectors. Sound accounting practices will greatly assist in improving public relations. This is particularly important in the operation of the collection department. Year after year customers are exposed to credit approvals, collection of delinquent accounts, deposit guarantees, as well as the highly personal contacts with collectors. If the system is too rigid or improperly supervised, many complaints may result, which would have been avoided under more liberal practices. In concluding, Mr. Mayo stated that if the accountant, in the midst of his many problems of developing satisfactory mechanics, kept one eye on the requirements of the management, the other on the income account, and both eyes on the need of proper public relations, much could be done to maintain the highly important relationship between the company and its customers.

An outstanding paper was next read by Mr. A. J. Bohl on "Proved Economies in Commercial Accounting Operations." It appears in the current issue.

One of the many interesting presentations was by Mr. H. P. Sparkes, Sales Manager of the Westinghouse Electric & Manufacturing Company, on the subject "16 Functions on a Watthour Meter's Chest." Mr. Sparkes' paper was provocatively illustrated by a number of cartoons.

The next speaker was Major H. S. Bennion, Vice-President and Managing Director of the Institute, who spoke on "Cost Accounting Practices in Federal Government Departments," presenting the differences in theories and practices of accounting in Federal Government Departments and in Industry.

The closing address of the morning session was delivered by Mr. Francis J. Brett, Vice-President and Controller of the Niagara Hudson Power Corporation, on the subject of the "Scope of the Controller's Responsibilities." Mr. Brett, not satisfied with a mere routine presentation of an orthodox listing of the Controller's duties, carried the delegates in attendance to a high pitch of emotional reaction by dealing with the human personal equation in our business.

Informal Dinner Session

At the informal dinner held on Tuesday evening, President Kellogg took over the gavel as toastmaster, following a brief word of appreciation for his presence and services by Mr. Rodey in behalf of the General Accounting Committee. Mr. Kellogg spoke briefly on the importance of the accountant in his field and the seriousness of his obligations at the present time, following which he introduced the Honorable Edward J. Kelly, Mayor of the City of Chicago.

Mayor Kelly gave the delegates a short but emphatic message of encouragement in their endeavors, which was enthusiastically received. His presence at the Conference added to the color and enthusiasm of the occasion. The delegates were very appreciative of the honor conferred upon them by the presence of the chief executive officer of the host city. The Mayor's address appears in this issue.

Following Mayor Kelly's address, Mr. Kellogg acknowledged with appreciation the presence of Mr. Frank L. King, Controller, Continental-Illinois National Bank and Trust Company, representing the Controllers Institute of America, Mr. John L. Carey, representing the American Institute of Accountants and Major Forward, Managing Director of the American Gas Association.

Professor Roy B. Kester, of Columbia University, talked on the subject of "Unbalanced Objectives in Financial Accounting."

Mr. Kellogg next acknowledged the extraordinary services of the Planning Committee and Staff associates in the preparation of the Conference program. A rising vote of thanks was given to those in charge of the Conference arrangements.

Following these acknowledgements, the Rev. John F. O'Hara, C.S.C., President of the University of Notre Dame, told why "Accountants Need a Sense of Humor." Father O'Hara's address was much to the point and enthusiastically received and enjoyed by all those present. His remarks constituted a highlight of the gathering and they appear in full in this issue.

Wednesday, General Sessions

The Wednesday General Sessions included an array of speakers seldom if ever matched before in any Accounting Conference. Most of the papers presented at this session are printed in full in this issue. Starting shortly after 9:00 a.m., Mr. A. M. Hartogensis, Chairman of the Classification of Accounts Committee, reported briefly for that Committee and also discussed the subject "Is Gas A Step-Child in Combination Company Accounting?" A feature was his summary of a tabulation indicating the status of the electric utility accounting requirements by states. He stated that 12 states have prescribed the N.A.R.U.C. system of accounts without modification and three with modification. Eight states in-

EDITOR'S NOTE

Space does not permit publication of all the papers presented at this Accounting Conference. Twenty-eight papers were given at the General Sessions and Dinner Session alone and at the group committee meetings on Monday and Tuesday afternoons some twenty or more additional papers were read and discussed, not to mention many of a miscellaneous nature which, although not formally scheduled, were offered for consideration.

Exclusive of the papers presented by the Chairmen of the various Accounting Committees, this issue of the Edison Electric Institute BULLETIN carries the complete series of those papers presented at the Tuesday and Wednesday General Sessions, together with the three addresses of the informal dinner occasion. Succeeding issues of the BULLETIN will include many of the reports presented during the specialized committee session, a number of which represent outstanding contributions to accounting development and progress.

An attempt has been made in the accompanying article to outline the Conference. Those subjects which appear as articles elsewhere in the issue have brief mention only.

Mr. B. S. Rodey, Jr., Chairman of the General Accounting Committee, desires that the papers printed herein should be taken to represent the personal thoughts and viewpoints of their authors and not necessarily be considered as expressive of any consensus of opinion by the respective technical committees, associations represented or by those attending the Conference.

cluding the District of Columbia have prescribed the F.P.C. system of accounts without modification and three additional states with modifications. Altogether 25 states, including the District of Columbia, have, to some extent, and with greater or lesser modifications, adopted the new system of accounts and four others have made its use optional. Concerning the problem: "Is Gas A Step-Child in Combination Company Accounting?" Mr. Hartogensis found that a circumstantial case had been made in the affirmative. The Statistical Department of American Gas Association has made a study covering the ten calendar years 1929 to 1938, inclusive. This study includes combination companies, the gas departments of which represent, in the aggregate, about 16 per cent of the manufactured gas industry, and straight electric companies and straight gas companies, the latter representing 44 per cent of the manufactured gas industry. The study shows that in each of the ten years, net operating income represented a greater percentage of utility plant account for the group average of straight gas companies than for the gas departments of combination companies and that, on the other hand, the electric departments of combination companies fared considerably better than did the straight electric companies. In other words, the electric business prospered in combination companies while the gas business showed a smaller return in such companies than for those in a state of single blessedness. Mr. Hartogensis stressed that equitable cost allocation between the electric and gas departments of combination companies is of vital importance to management, because if one department was shown erroneously to be more profitable than the other, development of the business of the more apparently profitable department would be promoted more strenuously with a resulting further decline of the other. In such cases, the cumulative effect of the error would be detrimental to the total earning power of the company. After discussing in some considerable detail the survey of the situation to be undertaken by his Committee and on what they might encounter in the course of their studies, the speaker concluded by stating that, recognizing the importance of and the general interest in the subject, the Classification of Accounts Committee would, at Mr. Rodey's suggestion, undertake a study of the question of cost allocation in combination companies.

Dr. Stuart A. Rice, Chairman of the Central Statistical Board, presented a very interesting paper, included in this issue, on the subject of "Industry Reporting Within a Rationalized System of Federal Statistics."

Following Dr. Rice, Mr. C. E. Kohlhepp, Chairman of the Depreciation Committee reported on the Depreciation Committee activities. He was assisted in the presentation of his report by Messrs. H. C. Davidson, M. D. Hooven, and H. C. Hasbrouck. It is planned to reproduce later the full substance of these reports. The high spots of Mr. Kohlhepp's report were that both the 1938 and 1939 reports of the N.A.R.U.C. Special Committee on Depreciation suggest that "straight-line" is the most satisfactory method of providing for depreciation. Straight-line depreciation, which is applicable in a number of ways other than as specifically urged in these reports, may be one convenient way of providing for the amortization or distribution of property cost, but it is by no means the only sound, fair and reasonable method. A total of about ten approved methods are in use. The imposition of straight-line depreciation upon the entire utility industry would entail harmful consequences for many companies, as well as rate payers. The adverse effects would far outweigh the claimed convenience of this method. Since the incidence of actual depreciation is so unpredictable, all of the depreciation accounting methods, including straight-line, merely represent attempts *to provide for* and distribute equitably the cost of depreciation over the useful life of property. Because all methods are subject to this infirmity, assumed greater convenience cannot justify choosing straight-line to the exclusion of all other accrual methods, especially during a transition period when the greatest need is for flexibility. The "depreciation situation" is an old one. The problems are many and of great complexity. Changes in methods involve repercussions of great importance, not only to companies but to rate payers and regulatory commissions. The stubbornness with which depreciation has defied efforts to solve its many problems for many years suggests that it is the part of wisdom to expect a gradual closing of the many gaps, steady progress over a period of years, rather than a complete settlement in a year or two.

Mr. Kohlhepp suggested all companies now having comparatively low depreciation reserves, resulting from good faith use of the retirement principle, should plan to increase their reserve balance as soon as may be—transition problems of course receiving appropriate consideration, to a minimum approximating the amount of actual depreciation that would be disclosed by a thorough engineering inspection and study. Mr. Kohlhepp closed with the statement that the objective continues to be the development of depreciation accounting methods which will be sound factually and financially, and so clear and understandable as to make misinterpretation or misuse impossible. He admitted that the Committee had no single or simple solution to the problem to offer, but was quite sure no one else has either. It is endeavoring in a modest way to act in the best interests of the industry as a whole.

Mr. Davidson covered the progress which is being made today in connection with the development of factual information for the use of the Depreciation Committee in its studies. This work, is progressing along two lines: (1) the development of the causes of retirements and (2) the development of financial statistics. The subcommittee has continued its efforts to study the causes of retirement of utility property under the broad groupings of physical, functional, and external reasons, for withdrawal. It has also endeavored in recent months to assist the Edison Institute Headquarters Staff in a permanent plan of compilation of more complete general financial statistics regarding depreciation than heretofore available. This will include both actual amounts and pertinent ratios and trends of depreciation charges and the depreciation reserve. In the preliminary survey, the Institute has endeavored to work, as far as possible, from information it already had at hand. The purpose of this policy was to utilize the available information at Headquarters and to reach a conclusion as to the most useful statistics before asking the assistance of the member companies. In the last analysis, however, the information sought will have to be secured in large part from the companies, and be completely verified by them. Whatever the form of procedure in securing the information, the important thing was that it be compiled.

The undertaking is still in the formulative stage, so the purpose in discussing it at the Conference was to enlist support and cooperation in furnishing the necessary factual information, toward the end that adequate authentic figures on this subject may be built up by the Institute.

One aspect of this activity is the matter of cooperation with the Depreciation Committee of the N.A.R.U.C. in the development of factual data regarding the causes of retirement. In the discussions of various phases of the depreciation question, at the joint meeting of the conferees of the E.E.I. and A.G.A. with the N.A.R.U.C. Committee in Chicago last February, one of the points upon which the two groups appeared to be generally in accord was that the varying characteristics of depreciation have a direct bearing on the value of property during its useful life and that the exent of loss in value in existing property is affected by the nature of the changes taking place in it. The desirability of relevant factual data regarding depreciation was apparently generally recognized and at that meeting it was mutually agreed that the subcommittee of the industry and the N.A.R.U.C. should collaborate in the compilation of such information which might in general be accepted by all. That program means in substance that complete publicity must ultimately be attached to the results of the study. Mr. Davidson concluded "There is no doubt but that the depreciation question needs leadership at the present time—leadership that will undertake to meet its requirements in good faith, that will recognize its true characteristics and avoid 'isms' in its application."

Mr. Hooven as head of the newly organized Engineering Subcommittee reported that not half of its members had the subject of Depreciation as a specific part of their bread-and-butter jobs. Perhaps this made it easier, at the organization meeting, for each member to make the flat assertion that he would approach the problem without prejudice or bias toward any particular formula. Before that meeting a preliminary outline was drawn up by Messrs. Rodey and Kohlhepp to indicate the suggested scope of the subcommittee's activities. This was not a definite assignment; it was rather a topical outline of problems to which engineers might be expected to make a useful contribution. But the Committee preferred to consider its task as an even larger assignment—that of placing its services at the disposal of the main committee to further accomplishment of the general object described by Mr. Kohlhepp at this Conference just a year ago: "Our problem and task stand out crystal clear. We must devise, or assist in devising processes of accounting for depreciation which will be sound factually and financially, and at the same time seek to make such accounting so clear and understandable that it cannot be misinterpreted or misused. . . ." A search for the ideal objective obviously means close examination of existing formulas—not an arbitrary acceptance or rejection of any particular one. It means research into technical history and prophecy for the future based on advances in the electrical art. It means still more arithmetic done by both engineers and accountants. Regardless of specific instruction to the engineers, and even though their reports might adhere to the strictly technical, the combined field of engineering, accounting, management, regulation, rate making, law, economics, and philosophy would be wandered over in the search.

Mr. Harry C. Hasbrouck in his assignment concerned with the work of the Depreciation Committee entitled "Where De We Go From Here?" gave a brief forecast of the depreciation problem as it affects electric and gas utilities. Mr. Hasbrouck said among other things that, contrary to the cartoon, in a recent BULLETIN issue, captioned "Another hopeless case of straight line depreciation complicated by symptoms of obsolescence and depletion," he would not call the case hopeless. In medical language, his prognosis was favorable. He felt that much progress had been made in the past twelve months and there was every reason to believe that the next twelve months would see accelerated progress. All concerned now seem to recognize that the process of cost accounting, which is sometimes loosely called depreciation, is one concept and that the actual depreciation or loss in value is another, and that it is necessary for clear thinking not to combine the two. This is a great step forward. From such an agreement we can go on to find an answer to the problem that has perplexed and sometimes appeared to be about to wreck the light, heat, and power industries. But there is a great deal of work yet to be done. Five years is not too much to explore all the complicated factors which result in depreciation, and to learn the best way to forecast their effect and adjust our accounting thereto.

Mr. Hasbrouck said he was skeptical about the development of any simple formula, and still more skeptical about complex formulae with a plausible appearance (to the uninformed) of mathematical accuracy. In fact, he didn't think much of any formula. It was too likely to be used as an excuse to escape from thinking a problem through. Whatever would be done in the five years' study would leave abundant room for the exercise of informed judgment. Accountants should never forget that they are trying to solve a problem, not merely to win an argument. However unfair and preposterous may seem the conclusions of opponents in any particular controversy involving depreciation and the accounting therefor, there should be credit for honesty of opinion even when it is mistaken. There is something to learn, and something to teach. One of the constant difficulties which has served to confuse the "depreciation problem," and to make it a problem, is the failure to present facts and arguments clearly and consistently in cases before regulatory commissions and courts. One of the jobs that is now being carried on under the sponsorship of the Edison Electric Institute's Committee on Depreciation Accounting and the eager industry of Mr. Rodey is the analysis of testimony and exhibits in cases involving depreciation, to bring out the elements of weakness and strength in the presentation made by both sides to the controversy. In conclusion Mr. Hasbrouck stated that he wished only to repeat that we have come a long way during the past twelve months, but that we still have a long way to go, although with more certain steps toward a less misty goal.

An interesting paper prepared by Mr. Charles B. Couchman on the "Accountancy of Tomorrow" was presented by his partner, Mr. Joel Bowelby, because of the author's recent automobile accident. Other excellent papers presented at this session and also reproduced in this issue, include talks delivered by Mr. M. B. Folsom, Treasurer of the Eastman Kodak Company; Mr. William W. Werntz, Chief Accountant of the Securities and Exchange Commission; Mr. F. L. Griffith, Vice-President of the Peoples Gas Light and Coke Company of Chicago; Dean J. E. McCarthy of the College of Commerce, University of Notre Dame, and Mr. A. R. Colbert, Chairman of the Depreciation Committee of the N.A.R.U.C.

The Session was honored by having Mr. P. S. Young, Chairman, Executive Committee, Public Service Electric & Gas Company of New Jersey pronounce the benediction and close the session. Mr. Young was much impressed by the results accomplished by the Conference.

Group Committee Meetings at the Accounting Conference

RARELY have the Accounting Committees ever received such sincere commendation for their efforts as was given for the excellence of programs and thoroughness of presentation of subjects at the group meetings held in Chicago. The papers presented at these were valuable contributions to accounting literature. As space permits, a number of these will appear in later issues of the BULLETIN.

A brief account of the meetings of each group follows:

PLANT ACCOUNTING AND RECORDS COMMITTEE

Meetings of the Plant Accounting and Records Committee were held Monday morning, Nov. 13, Monday afternoon and Tuesday afternoon. The Monday morning meeting was a closed meeting, limited to the members of the Plant Accounting and Records Committee and a limited number of committee member associates who are closely associated with the committee's work. The Monday afternoon and Tuesday afternoon meetings were open meetings, each session being attended by approximately 250 enthusiastic conference delegates. Mr. J. V. Cleary, Chairman, and Mr. H. P. Taylor, Vice-Chairman, presided at these meetings.

The Monday morning closed meeting was devoted largely to a review and discussion of the scope of the committee's activities and outlining the committee work for the ensuing year.

The committee members discussed the possibility of more closely coordinating their activities with those of the Plant Accounting Committee of the American Gas Association along the lines already adopted by the Depreciation Committees. Mr. A. A. Lipschutz advised the members that the Technical Groups were in favor of having a subcommittee of the Plant Accounting and Records Committee handle the technical problems reporting directly to this committee and serving in an advisory capacity to the Technical Groups. Upon resolution made and seconded, it was unanimously agreed that the necessary organization be established for this purpose.

The Chairman distributed to the committee members for their review and comment copies of a report outlining briefly the History of Regulation and Continuing Property Records in the industry as well as some entirely new and original concepts of what might at some future date be the basis for establishing an automatic rate base.

The Monday afternoon session was devoted to the reading of several papers followed by open discussion relating to Original Cost Determination and Plant Accounting Operations. Mr. MacRae outlined in a very comprehensive manner his thoughts on the legal aspects involved in the classification and possible ultimate disposition of the amounts included in the "Plant Acquisition Adjustment" and "Plant Adjustment" Accounts. Mr. G. M. Vesselago then introduced the subject of Perpetuating the Original Cost Records, which was generally discussed. The subject of various methods of analyzing costs was presented by Mr. S. W. Kittleman, who also took part in the subsequent discussion. Mr. G. K. Campbell outlined in a very thorough and comprehensive manner the various problems arising in connection with the Acquisitions of Property which resulted in some interesting discussion. The Manhour Method of Distributing Labor Costs was reviewed by Mr. L. I. Gibb, who answered a number of questions in connection with this relatively new accounting feature. The session was concluded after some general comments regarding the methods of Allocating Engineering and Supervision Costs which were sponsored by Mr. A. A. Lipschutz.

The Tuesday afternoon session was devoted largely to a discussion of various problems relating to Continuing Property Records. The session opened with a general discussion regarding Segregations to be Maintained for so-called "Mass" Accounts and problems involved in Aging Overhead Systems. Mr. G. K. Campbell outlined generally his thoughts in connection with these problems and led the prolonged discussion which followed. The subject of C.P.R. Units Vs. Retirement Units for "Inside Plant" Property introduced jointly by the Chairman and Mr. H. P. Taylor created considerable general discussion. A very interesting presentation in connection with Control of Construction Cost through Continuing Property Records was made by Mr. E. G. Hery, who also conducted the discussion which followed. Mr. H. P. Taylor then introduced the subject of Form of Continuing Property Record for Meters and Transformers, which created considerable active discussion.

All of the sessions were productive of great benefit to the delegates, particularly the Tuesday afternoon session.

CUSTOMERS' RELATIONS, COMMERCIAL ACCOUNTING & COLLECTIONS COMMITTEE

The well prepared and very interesting program of this group was enthusiastically received by the 175 delegates who attended the three sessions which were held on Monday morning and afternoon and on Tuesday afternoon. Among the outstanding papers presented were those of Mr. J. A. Williams on the subject of "Meter Book Routing and Meter Reader Compensation"; Mr. W. D. Dyer, "Do Good Public Relations of a Utility End at the Door of the Collection Department?"; Mr. E. N. Keller, "Customer Accounting Problems in Connection with Statistics for Federal Power Commission Report"; Mr. William T. Sperry, "It Might Happen Here" (in Commercial Accounting Operations); Mr. L. A. Mayo, "A New Plan of Rewriting Meter Reading Sheets"; Mr. J. O. Hill, "Rewriting Meter Reading Sheets by Alphabetic Tabulating Cards."

These papers were all mimeographed in advance of the meeting and were distributed prior to the meetings in order to form a basis for their discussion. Other highlights of this group's meeting included the presence of Mr. H. P. Sparkes, who was thoroughly cross-examined on his general session paper entitled "16 Functions on a Watthour Meter's Chest."

Mr. Stanley P. Farwell of the Business Research Corporation, presented an excellent paper on Business Administration in the Commercial Accounting Field. This paper was a real contribution covering the following factors involved in the effective organization of commercial accounting work: Men,

Methods, and Facilities Necessary, Importance of Personnel Element, Training Personnel, Conference Method, Leadership, Functional Supervision, Customers' Relations, Centralized Customers' Departments, etc. Mr. L. M. LaPorte gave an excellent detailed explanation of Mr. Bohl's paper, which was presented at the General Session on Tuesday morning on the subject of "Proved Economies in Commercial Accounting Operations." A lengthy and interesting discussion followed.

Rarely has this reporter seen greater evidence of enthusiasm and interest than existed in this group meeting. There was no hesitancy on the part of anyone there to get up and freely speak his mind. Mr. Mayo, Chairman of the Committee, is to be congratulated.

CLASSIFICATION OF ACCOUNTS COMMITTEE

Attendance at these sessions varied from about 40 to more than 130. At one time, it was necessary to provide additional chairs for the visitors. After brief opening remarks by the Chairman, who urged free and active participation in the discussions by all who were interested in the subject, Mr. Haight presented a paper on "Accounting Provisions for Merchandise, Jobbing, and Contract Work, and Work on Customers' Premises", stressing the nature of merchandising as an auxiliary to promotion of sales of utility service. Mr. Ambrose, speaking of "Contributions in Aid of Construction," pointed out the distinction between contributions of capital cost of extensions, and payments which are intended to provide adequate revenues where the estimated amount of service required, at the regular rates, would be inadequate to provide a proper return on the additional investment in the extension. He emphasized the fact that contracts should be so drawn that the nature of the payment will be clear and that where required to make up for deficient revenues, the amounts so collected and non-refundable might be included in operating revenues and not as a permanent balance sheet item.

A "System for Account Distribution of Labor Cost" was described by Mr. Clark. This was illustrated with copies of the forms used by the company whose system was described. Stress was laid on the necessity for adequate employee training if proper account distribution is to be achieved. Mr. Clark also pointed out that proper account distribution of labor cost is particularly important because labor cost represents such a large portion of the operating expenses.

Mr. Hartogensis spoke on the "Relationship of Account Classification to the Control of Expenditures." After drawing a distinction between the industrial and utility cost accounting problems he showed that in the utility there were two distinctly different types of cost—cost of service and cost of operations. The necessity of determining cost of operations in order to control expenses and lower cost of service was pointed out, as well as the inadequacy of the present functionalized system of operating expense accounts as a means of controlling cost of operations.

The system of "Internal Control and Audit Procedure" of a large eastern utility was described in a paper written by Mr. Lanning and read by Mr. Rissland in Mr. Lanning's absence. In this paper, the distinction between accounting and treasury functions was brought out very clearly.

Mr. Glendening, speaking on "Maintenance Charges in Systems of Accounts," introduced a novel point in connection with mortgage requirements as to maintenance expenses. This was in connection with maintenance of certain types of equipment, such as stores and transportation equipment, where the cost of maintenance is included in clearing accounts and cleared, in part, to operations or plant accounts.

"Balance Sheet Accounts and the Public Interest," by Mr. Miley, stressed the need of clarity, free of technical and ambiguous titles, in the published balance sheet. The 1938 balance sheet of a prominent utility which presented a short, simple, layman's description of each item was illustrated as a model for development of public understanding and confidence in utility financial reports.

In the discussion which followed each topic, further remarks and information on the respective subjects were offered by members of the audience. Particular interest of members of the audience was expressed in the papers on Contributions in Aid of Construction and on Internal Control and Audit Procedure.

PURCHASING, STORES & TRANSPORTATION COMMITTEE

At the Monday morning session three papers were presented, "Establishing a Base for Materials and Supplies—Stores Expense—Clearing Rates," "Accounting for Materials and Supplies with Mechanical Accounting Equipment" and "Purchasing Commodity Codes." These papers were enthusiastically received and freely discussed. The Chairman, Mr. K. C. Campbell, was particularly pleased by the fact that 15 to 20 people took active part in the discussion at each meeting. The results of the questionnaire on "Establishing a Base for Materials and Supplies—Stores Expense — Clearing Rates" furnished helpful data for discussion. The papers on "Accounting for Materials and Supplies with Mechanical Accounting Equipment" were discussed and many requests for copies were made. Mr. W. N. Boehm made a noteworthy contribution to the Edison Electric Institute conference files in his presentation of the Mechanical Accounting System of the Consolidated Edison Company of New York.

At the Monday afternoon session the "Effective Control of Materials and Supplies" proved to be a lively subject for discussion. The subject of "Inspection and Testing of Purchases" disclosed the need for these examinations and will prove interesting reading for those who could not attend this session.

At the Tuesday afternoon session the subject of "Accounting for Minor Materials and Supplies as 'Exempt Material'" was presented for consideration by Mr. C. H. zurNieden of the Philadelphia Electric Company.

DEPRECIATION COMMITTEE

This Committee held its one session on Tuesday afternoon. The program included a report to the Depreciation Committee by the Chairman of the General Accounting Committee on the various accounting activities of the Edison Electric Institute as a whole made at the request of Mr. Kohlhepp. In addition and by request, he covered briefly a thought-provoking "accountancy of tomorrow" plan of rate regulation under a simplified and different theory of plant account system. Mr. C. E. Kohlhepp gave a detailed report of the progress of his Committee. He was further assisted in covering the activities of the Committee and its aims for the future by Messrs. H. C. Davidson, H. C. Hasbrouck and M. D. Hooven. One of the highlights of the afternoon session was the presentation by Mr. Joseph Jeming, a young consulting engineer, of "An Asymptotic Method of Determining Annual and Accrued Depreciation." There was some floor discussion, with comments by Mr. H. M. Tickle of the Alabama Power Company and others present.

Address of Welcome

By Bernard W. Lynch
President, Standard Gas and Electric Company

Opening address before the Third National Accounting Conference, Edison Electric Institute. Chicago, Illinois, November 14, 1939

GREETINGS and welcome to Chicago! I compliment you on this assembly gathered together here to carry out a great tradition for our industry—an accounting clinic for the improvement of service in all its aspects. The gratitude of the industry is due your officers, chairman, committeemen and members for your devotion to this work.

At the same time we can well afford to pay tribute to the men who in the past so arduously served as accounting section chairmen and committeemen in outlining and administering a program of standardized accounting procedure, for the Lord only knows where we would be today in this era of investigations, reports, registration statements, prospectuses, etc., if we had not learned to speak a common language and to have a common understanding concerning the fundamentals of accounting as they apply to the public utility industry.

Our industry is at the crossroads of legislation, regulation, service and public opinion. Impossible as it is for any one of these roads to be traversed alone in a straight course, I am glad to say that I believe a better understanding is being reached between our industry and these four agencies.

The accounting division has been one of the strongest factors in bringing about this closer understanding and more satisfactory state of cooperation between Government and the public utility industry, yet much still remains to be accomplished, but I am confident that the strength and fortitude that have been developed through these years of your working and progressing together will make it possible for you to grasp more quickly the problems of tomorrow and take them in stride.

Time will be required, effort will be demanded, sacrifices may be necessary, but accomplishment will be achieved.

There is some gratification in finding from time to time that among the persons who have been delegated to regiment, or organize our business, there are men who display a willingness to concentrate upon and study our problems as they relate to the requisites, or demands, of legislation and regulation.

These persons and groups realizing their own responsibilities have asked our cooperation and they are getting it. In return, they are making suggestions—sometimes only of an experimental nature—that we may try out and analyze before they are set up as rules of the procedure.

It would seem, therefore, that some definite progress is being made.

We are now in the midst of a great social, economic, business and international complication.

We await with business leaders of the world each word of news as it comes to us by the radio, press and other agencies, as well as the results of our own investigations.

A national emergency exists without a doubt, but thank Heaven, from the standpoint of our industry, we are better prepared to meet it today than we were in 1917. We have learned important lessons in production, transmission and distribution of power. We have better learned to anticipate the needs of our customers and we are always ready to supply those needs as demanded.

Unfortunately, many of these lessons have been learned during times of distress and disaster such as today, but that does not dishearten the men of the public utility industry. Your organizations and mine still have in their ranks men who pioneered and are responsible for these results. Let us not forget these men who are still carrying on this heroic work.

Most likely the foremost problem confronting us today is that of integration which, when completed, will result in reorganizations of corporate, financial and physical structures. Perhaps we may have to submit to be taken apart and put together again, but I believe that after the operation we will still recognize ourselves.

In the meantime, our service must go on. It must not only go on, but it must improve, and all of us must be ambassadors from our industry to the public we serve in bringing to them more deeply the realization that we are honestly endeavoring to provide a better public service and, with it, even more efficiencies and economies.

It is our personal desire and intention to do these things regardless of any political, legislative, or economic pressure that may be exerted upon us, and I'm sure we will all be in the game, working our hardest—with a fine example of teamwork.

I have carefully read the program for your accounting conference. From an association with your profession of more than a third of a century, I can honestly say I have never seen a program with more progressive and complete coverage. The very first paper to be presented this morning is indicative of the spirit of your conference. It starts out with "Streamlining"—which is the word of the day on land, on sea and in the air.

One part of your printed program which interested me deeply is the letter which appears on the inside front cover, and is one of welcome to your chairman, Mr. Rodey, from the Mayor of this great city. That letter is significant—in its source and what it represents. It is emphatic, clear and concise in its meaning. To me, it deserves the prominence it has been given in the program, because it is a masterpiece of welcome, understanding and encouragement to all of you.

Let me call your attention to a few sentences in that letter. I quote:

"We can glean the best out of the past, conserve the best of the present and make the best of the future, if we develop first the capacity to cooperate before the capacity to produce. Management and labor, political and civic leadership, cannot advance with divided loyalties and conflicting purposes."

He adds:

"Your responsibilities are as great as your rewards."

I would like to paraphrase that statement by saying:

"I wish you could expect rewards as great as the responsibilities I know you have."

I thank you so much for inviting me here this morning because it is always a grand feeling to be with the men of the accounting section.

Mayor Kelly Welcomes the Conference

By Hon. Edward J. Kelly
Mayor, City of Chicago

Address at the dinner meeting, Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 14, 1939

CHICAGO welcomes your coming—and as Mayor of Chicago I am happy to be with you.

From your findings here I am confident that you will convince me of many things.

You've probably heard that old story about the boss who said he was always open to conviction—but he'd like to see anybody who could convince him!!!

When it comes right down to cases, bosses don't have any rights at all—all they have is responsibilities.

The only real boss in America today is public opinion—and it can't be served with silence.

I happened to be in New York last week to study their methods of garbage collection and disposal.

While there I went in to see Mayor LaGuardia accompanied by Commissioner William Carey of New York's Department of Sanitation.

Mayor LaGuardia threw up his hands in protest to say—"You know, Mayor Kelly, every time I see Bill Carey I have to think about finding more money for new garbage equipment. He's always trying to sell me something new!"

And with that—experienced, mellow-minded Bill Carey said something that both Mayor LaGuardia and I will remember.

He remarked—simply—that "if you were thinking about adding new accounting machinery the same way that I am adding garbage collectors, you'd be saving more money—for as the quality of a service *increases*, the cost of it *decreases*."

Mr. Carey went on to say: "I am just an ordinary business man and I was pushed into this field of political administration—but I do think there's a great deal of penny wisdom and dollar folly in being afraid of innovations in service."

Now I know that Commissioner Carey—engineer, railroad builder and good executive—was taking the practical *long* view on business.

The successful technique in any operation ultimately comes down to knowing where you want to go—knowing what will take you there—and *staying put* against high-pressure and false propaganda.

The part-time auditor today is a thing of the past. The "hit and miss" accountant went out with the High Stool Ledger Jockey.

Yours is a recognized profession today that deals in something more than cold-blooded figures and cost-estimating charts.

Into your plans for our future progress is going the incentive that builds high the morale of our young men in industry today—a combination of values that adds up in the lasting satisfaction of a job well done—and done the honorable way. That is the thought we must keep foremost in training our youth.

Beyond adding up the results *after* they happen—your profession gives you the ability to predict what *will* happen if business operations are not properly protected and safeguarded with more than financial reserves.

In generating respect for the utilities—you are high-lighting the great service they give to humanity. You are thinking then in terms of human values as well as trial balances.

WHAT WE DO WITH WHAT WE KNOW—that's the vital thing that has to be brought down to a simple method of operation.

Huxley was right when he said, "Scientific thinking is organized common sense."

The salesman knows that the average man today is fighting two eternal things—time and circumstances.

He is trying to stave off fear—debt—weariness and discouragement—and trying to have a little fun and comfort in between.

And the man on the firing line will tell you that the average man is too busy to listen if he has to wade through a fog of facts—and a shower of statistics.

I have come to think that the real hold-backs to humanity are not the precedent breakers, or the tradition smashers—whether they're right or wrong. I believe it is the type of stuffy one-way thinking that would mould humanity into a groove that strait-jackets ambition and the will to expand.

In widening your field of opportunities, you may have stumbled into progress at times—you may have had science chartering your way—but at all times you have had a passionate hunger to go ahead and not stand still!

Ellis Parker Butler once wrote about a cow that had learned to climb a tree.

The cow attracted the farmers for miles around—naturally. A tree-climbing cow was much more exciting than an ordinary cud-chewing cow.

But when she got home at night she didn't give much milk.

The cow could play around—or give good milk. But it couldn't do both!

While there has been much criticism of this age of specialists—special planning and special research—I'm for it.

Science has done things for the human body because doctors have segregated their interests—and concentrated on eyes and ears—heart and nerves.

The aviation interests have done the same thing—because they have segregated their interest in wind velocity—types of propeller—design and air routes.

The radio men could not have brought us so quickly to the perfection of sound and reception we now enjoy—if there had not been specialists on transformers—specialists on low-wave frequences—and the many other miracles of the ether.

All of them have studied each part separately—and then collectively—to arrive at the perfect whole.

Specialists in engineering—accounting—or science—are not special pleaders—because that is not economic research.

True research fears nothing or no one.

It is without bias—and immune to "the easy way out."

Research has no axe to grind—no cause to shout.

It is a *fact-finding* effort that seeks the truth—and lets the chips fall where they may.

But it can't be guess—or "hunch" thinking.

It can't be crystal-gazing or loose reasoning.

It is not propaganda.

It is not high-sounding oratory.

It is something more than just facts—it is the *reason why* those facts exist.

Not just the fact of business slumps—but the reason!

Not just the fact of a better system of cost analysis—but the reason!

Not just the fact of changing conditions to meet changing times—but the reason!

Not just the fact of cooperation—but the reason for its need!

When we have the reason—I think we are getting down to the bedrock in human relationships.

It goes beyond a cure for the cure's sake—it reaches out to elevate humanity and raise our standard of living because of an eternal urge for the decency and welfare of all men.

Inventions can throw many plans out of gear—and knock established traditions into a cocked hat.

The automobile did it—the refrigerator did it—the radio did it.

But if they revolutionized our customs—they also created a happy evolution in better living!

A banker once defined invention as "that which made his securities insecure."

Maybe that's why so many of us are afraid of change—afraid to disturb the existing order of things—(a quarterly dividend check is many a man's definition of the "existing order")—afraid to meet the challenge of the present and the consequences of a stagnant future.

I would rather believe that prosperity is an outgrowth of security that has been developed by human intelligence—and not by adding machines;

That we won't invent troubles if we don't have them;

That we won't create difficulties if they are not already with us—and that if we take the *broad* outlook, it will also be the *bright* outlook.

The surest thing in our Democracy today is the stamina and courage that come out of a crisis to prove that America can't be licked—America won't stagnate.

In all your findings—in all your interchange of thought—I believe that is the dominant influence:

That with our natural resources—the deep-rooted love we have for our freedoms—the non-partisan guarantees that we have to enjoy them—all combine to make America today not alone the last citadel of freedom—but the widest gateway for the opportunities of science—and more and more benefits for more and more people.

You are not expected to be the torch leaders.

But you are expected to be unselfish about your contributions to advance our American way of life.

Never in the history of America has there been greater need for more minds with clear vision—more hands ready and willing to mold a better destiny—more cooperation between all phases of our economic and social life—to raise our standard of living and hold high the morale of our boys and girls who will be the citizens of tomorrow.

I would like to leave with you a simple ideal:

KNOW WHAT TO DO WITH WHAT YOU HAVE.

That is reason alone for making the most of this 1939 conference—and setting up a program for the coming year that will keep the electric industry and the Edison Electric Institute among the leaders.

Chicago is grateful that you came.

The whole nation is leaning more and more upon your ability to find the answers to increased security and a more stable morale among our people.

I am sure you will not fail them.

SOME COMMENTS ON THE CONFERENCE

. . . it was a very substantial intellectual profit to have the privilege of participating in this remarkably fine conference.

* * *

. . . I was particularly impressed with the attendance at the committee meetings and the attentive interest displayed.

* * *

. . . If ever an accounting conference had glamour, this one had.

* * *

. . . Big program put over with conspicuous success.

* * *

. . . Everyone said it was a grand accomplishment . . . the public utility accountants are going places and have carved a niche in the hall of accountancy.

* * *

. . . The meeting was by far the best I have ever had the privilege of attending and I heard similar expressions from numerous other delegates.

* * *

. . . the papers were all excellent and the whole conference was extremely good.

* * *

. . . we are observing with deep interest the activities of your industry, because there are so many accounting problems that we have in common.

* * *

. . . I personally talked with more than fifty men who had attended the group meetings and they were unanimous in their reactions that the conference had been one of the best that they had ever attended.

* * *

. . . a most interesting and constructive program.

* * *

. . . I am afraid a lot of our people do not realize what a tremendous amount of thought and work had to be put into the program. The whole industry owes you a great debt of gratitude.

* * *

. . . Great program, well executed. Everybody I have met thinks the conference went over with a bang.

* * *

. . . it was an outstanding conference and outstanding success.

* * *

. . . the conference was a grand success.

* * *

Accountants Need a Sense of Humor

By Rev. John F. O'Hara
President, University of Notre Dame

An address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 14, 1939

IT was kind of your committee to assign the subject "Accountants Need a Sense of Humor," and not "Accountants *Lack* a Sense of Humor." The latter subject I should have had to decline; there is no point in giving advice on investments to an audience in the poor-house. I take it that you have the sense of humor—your wives verify or correct this assumption—and I proceed from there to suggest certain uses for this divine gift.

The sense of humor, it seems to me, is essentially the sense of proportion, directed by the imagination to new points of view. To the man who lacks the sense of humor, life must be a sombre, hopeless sort of thing. Whatever confronts him at the moment is the most important thing in life—and if it is accounting that is the most important thing in life, we can well fear for his sanity. If the use of his imagination is limited to searching the field of possible entries to dispose of a vexing item, the joys of life are closed to him. To be a useful citizen, to make the world a better place for our having lived in it, the accountant, like every other man, must be able to laugh at himself. As a matter of fact, if we carry the analysis far enough, I think we will find that the men who are doing the most to disturb the peace of the world today, are men who take themselves too seriously, who cannot laugh at themselves.

Now, I don't want to confine this criticism to Stalin and Hitler, I want to extend it as far as I can; I want it to include all of those who by their preoccupation with immediate tasks, fail to see the larger pictures they should see, pictures they should show to others for the common good.

Let me tell you how the accountants have sinned in this way. I don't want to startle you—and it is certainly far from my thought to set up false consciences. My simple purpose is to point out to you that most accountants have not realized their opportunity to counteract the calls to class war that we are hearing daily, because they have been chained to rules when they might have been pioneering.

What do I mean? I mean that accountants have allowed the word "profit" to become one of the most ignominious words in the English language. They have done this by adopting a stock-promoter's rather than a comptroller's mental attitude in their presentation of reports. The word "profit" became the gossamer from which silk gowns were made. It was a synonym for the something that a magic wand could evoke. It meant Castles on the Hudson built from the material of Castles in Spain. It was not something owed to somebody for a very real service; it was rather manna from heaven for the blessed few who were on the inside.

That picture of profit quickly became material for class warfare. The politician found it excellent for rabble-rousing. The bureaucrat seized upon it as the bottomless well for new government expenditures. And it remained the principal bait for suckers in Wall Street.

It is only very recently, the last few years, that an attempt has been made to tell what becomes of the consumer's dollar when it reaches the corporation. The United States Steel Corporation did a bit of pioneering in its reports published in United States Steel News, December, 1937, and January-February, 1938. It presented a nine-year report of operations. It noted that 50 per cent of the six billion dollars taken in during those nine years went for items over which United States Steel had no control (taxes, goods and services purchased from others, etc.), and that 85 per cent of the remainder went to wages and salaries, leaving 15 per cent of the remainder or 7½ per cent of the total, to be divided between bond and stock holders as a return for the use of assets employed in the production of United States Steel products. Incidentally, the rate of return to the stockholders was 2½ per cent on their investment.

The second cross-analysis, published in February, 1938, broke down the earnings in terms of employees. It showed very significantly that the total amount of assets (the owners' savings in the form of mines, plants, tools, etc.) was $11,534 for each of the 187,000 employees. It meant further significant interpretation of the expenses of manufacturing and eliminated the profit concept.

A few hundred firms have followed this lead, and have published, through public relationship counsel, but not through accountants' statements, a report to employees and to the general public. So far as I have seen, only one corporation, Allied Chemical and Dye, has used the term "wages for tools" to explain what the stock-salesman likes to call a "dividend." I want to stress this term "wages for tools," because it is essential to what has been called the "Notre Dame short-form of operating statement." I should explain that this is called the "Notre Dame form" because it originated within the group that has been doing a pioneering job of economic research at the University of Notre Dame for the past four years.

I wonder if accountants ever talk accounting problems over with their wives. It might be a good thing to try this. Wives are economists—they have to be—after all, we get our word "economics" from the Greeks, who used it in connection with the household budget. Most wives know the cost of pots and pans, and sewing-machines, and other terms of production, and they know their use, and depreciation, depletion, and replacement cost. They know the cost of carpets and of drapes. Most wives know at any given moment how much money they have, and how the cash balances with the obligations. Often enough, that's how they get their new hats. Now an accountant may not regard himself as an economist—but until he begins to realize that he holds the key to economics, we will continue to suffer the evils that we observe today—with industrial production well above the 1929 level and the depression still upon us.

How is this? It is a rather simple

matter. The accountant is the only man who has it in his power to give an x-ray picture of his company, of his particular industry, of, ultimately, the national economy. An x-ray picture requires a good film, a good camera, a good operator. The accounting department furnishes all three. And too often the accountant has refused to show the picture. Policies, both public and private, have been dictated by economists, whose sampling studies have given them a distorted picture of our whole economy, and whose emotional rhetoric has scared themselves, the politicians and the general public into jitters, out of which have come, on the one hand, the elements of class war, and on the other, legislation calculated to hinder still further our long-sought recovery.

Perhaps you will tell me that it is the statistician, and not the accountant, who is at fault. I refuse to accept the distinction. The accountant has not used his imagination and his sense of proportion in the right way, or he would be the statistician. It is the accountant who has the whole picture, and if he simply follows rules and takes orders, if he fails to give wings to his imagination to let it see that picture, if he fails to present that picture to his governing board, responsible for the policies which direct the employment of the people's money entrusted to the corporation, then I say he has failed—whether consciously or unconsciously he must determine for himself.

There is an ancient story that is much to the point as an illustration of the picture the accountant should present. It is of a negro revivalist who preached an excellent sermon, the burden of which was that salvation is free. The hat was passed. A brother in the front row rose up and protested: "Reverend, I thought you said salvation was free." And His Reverence replied: "Brother, you said a mouthful. It is free as the air you breathe. But it costs a lot to pipe it to you." The accountant should dramatize the pipe-line.

Last year, at the request of the Governor of Indiana, a Tax Study Commission analyzed the physical assets of the State of Indiana and the income of corporations operating in the State. The Federal Income Tax Returns for the state were used for this purpose—and for the first time, incidentally, a state took advantage of the federal government's permission to use these returns to help solve state problems. Later, the chairman of the Commission, Dean McCarthy, of the Notre Dame College of Commerce, published a simplified version of one section of this report, as one of the publications of the Notre Dame Bureau of Economic Research. He used the "Notre Dame short-form."

In a combined report of all electric, gas, water, and gas-heating utilities in Indiana, he showed that 10,190 men were in the employ of these companies, that their average wage was $1,161 per year, and that the public had invested $52,314 in tools for each man employed. The return to these investors in Indiana utilities was 4½ per cent for bondholders and 4 1/3 per cent for stockholders. The companies took in, from the sale of their product, a total of $78,147,601.46 in the year 1936. This amounted to $7,668 per employee. To keep these 10,109 men employed, the company paid $913 per man in taxes. Out of each $7,668 received, it spent $2,227 (33 per cent) for goods and services purchased from others; $1,128 for interest on mortgage bonds and $907 as wage payment for tools used by the men employed, while it set aside $775 per man (or 10.1 per cent) for depreciation.

Now let me dramatize this picture a bit. After paying their current just debts, and the service of their long-term obligations, and after making provision for maintenance, present or deferred, the companies had left $2,074 per man employed. Out of this sum the company paid on the average $1,161 each to the men who worked for them, and $913 to keep a man and a half employed on WPA projects. Those who put up their savings to lay cables and pipes, to furnish dynamos and coke ovens, received a return on the savings invested of 4½ per cent if they were bondholders, and 4 1/3 per cent if they held stock—and this return was subject to personal income tax assessment, an item they would have missed had they invested in government bonds instead of utility securities.

This, gentlemen, is not a class-warfare picture. Neither is it a stock promotion picture. But it is an honest picture, and one calculated to stimulate the use of common sense in the solution of our common problems.

The State of Indiana is not the only state which has used the short-form for an analysis of its economic problems. The State of Wisconsin has this year published some excellent reports on its economic position, under the direction of Mr. Joel Hendrickson, Supervisor of the Income Tax Division of the Wisconsin Tax Commission. The State of Illinois has been analyzed by Professor Dickinson of the state University, and his report will be released the last of this month. The State of New Hampshire hopes to have its analysis ready within the next three months.

The Wisconsin reports give much more detailed material than we find in the Indiana study. This is largely because the state income tax, with its $800 minimum exemption, affords a far more thorough analysis than was possible with the Federal returns, which were used in Indiana.

I have not at hand a specific study of the utilities of the State of Wisconsin, but I can give you the broad picture of the 8,589 corporations operating wholly in Wisconsin for the business year ending December 31, 1938. I find from these reports that 197,950 people invested their savings in these 8,589 corporations. They employed 208,640 persons. Please note that the number of stockholders was only 12,000 less than the number of employees—I am sure that in many cases they were the same persons. These 197,000 stockholders received from the sale of the corporation product a total of $1,314,361,564. You accountants call that Gross Income. Approximately one-half of that was paid out again for goods and services purchased from others. After other just debts were paid, these companies had left $114,317,097.

To dramatize this picture a bit, let me note that the investment in tools by the stockholders was $11,836 per person employed; that the gross income from sales was $6,269 per person employed. After paying for goods and services purchased from others, and for other just debts, the corporations paid an average wage of $1,376 to each man employed and gave the government $401 to keep a man on the WPA. The investors who paid $11,836 per employee for the tools received a rate of 1 1/5 per cent on their investment.

These references to the WPA are, I fully appreciate, a dramatic license. As a matter of fact, in this particular picture, the Federal Government took slightly less than $40,000,000 of the $84,000,000 collected in taxes from the Wisconsin corporations. As a further matter of fact, we realize that the WPA workers are paid more from future than

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The Controller's Job—What Is It and Why?

By Francis J. Brett

Vice-President and Controller, Niagara Hudson Power Corporation

An address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 14, 1939

SHORTLY after last year's meeting I met a friend of mine whom I had not seen in some time. He came up to me with his hand outstretched and said—"Well, hello, Frank, how are you? Say, I was out at the E.E.I. meeting in Chicago three weeks ago and I want to tell you that I am not the only one who is of the opinion that your speech was the best one you ever made." To which I promptly replied, "Now, just one moment, Harry, you are a bit mixed up. You see I was supposed to speak at that meeting but unfortunately I was taken ill and couldn't, so I wasn't even in Chicago, to say nothing of making a speech out there." He said, "I know, but that fact doesn't change my opinion any."

So when I received an invitation to speak at this year's meeting I promptly accepted. I made up my mind that no friend of mine was going to meet me three weeks from now and tell me that I made just as good a speech at this year's meeting as I did at the last. In other words, my last year's speech is going to stand out as my all-time high, as far as I am concerned.

There is one other little matter I should like to mention before getting into the subject assigned to me, and that is: What is there about this fellow Barney Rodey, our Chairman, that makes it impossible for any one of us to refuse to do anything he asks us to do? He simply calls up on the phone and in that good-natured tone of voice with which he is so singularly blessed, asks you to do something, tells you how and when he wants it done, and before you know it, you say yes, and then before you hang up your telephone receiver your secretary walks in with an advance notice of the meeting upon which you are amazed to find your name and the subject upon which you are to speak. You know that man just seems to reach right into one's vocabulary and remove the word "No" before you have a chance to use it on him. I have often thought that it is a lucky thing for feminity that he is not a Philandering Romeo!

About a month ago I received one of these telephone calls from our Chairman, Mr. Rodey, and he said, "Frank, you are to speak in Chicago on Tuesday morning, November 14, on the subject 'The Controller's Job—What is it and Why?'" So I said, "Now, just a moment, Barney, am I to ask that question or answer it?" "Why, you are to answer it, of course," said Barney. "You've been a Controller for years and you should be able to do that." So I said, "All right, I'll begin right now and tell you what kind of a job I happen to have." When I finished telling him, all that was left of the telephone wire was the insulation and I was no longer a member of the Holy Name Society, but rather a bang-up candidate for the Barge Captain's Union!

However, I didn't succeed in convincing Barney that I couldn't answer the question, that is, What is the Controller's Job and Why? so I came out here to prove it to him and to you, if you will be good enough to listen to me.

Of course in preparing what I have to say the great temptation which I had to overcome was to pick up one of the many textbooks on the subject of the controller and his duties and make enough changes in what I read to make what I had to say sound original. That would have been an easy way, but I was afraid, if you please, that I might fail to make a sufficient number of changes and subject my plagiarism to discovery. On the other hand, I might have had one of my associates prepare a speech for me, but here again I was gripped with the fear that he might prepare something so good that I would find it necessary to resign and at the same time recommend him as my successor. So I decided to undertake this job myself—come what may.

The Controller—As a Technician

First of all, I do not need to tell you that within the time allotted to me it would be impossible to cover, even briefly, all of the functions of the controller. I should like, however, to read to you a statement published by the Controller's Institute of America (the organization which I have the honor to represent upon this occasion) setting forth certain specific duties of the controller and consisting of seventeen items:

1. The installation and supervision of all accounting records of the corporation.
2. The preparation and interpretation of the financial statements and reports of the corporation.
3. The continuous audit of all accounts and records of the corporation, wherever located.
4. The compilation of production costs.
5. The compilation of costs of distribution.
6. The taking and costing of all physical inventories.
7. The preparation and filing of tax returns and the supervision of all matters relating to taxes.
8. The preparation and interpretation of all statistical records and reports of the corporation.
9. The preparation, as budget director, in conjunction with other officers and department heads, of an annual budget covering all activities of the corporation, for submission to the board of directors prior to the beginning of the fiscal year. The authority of the controller, with respect to the veto of commitments or expenditures not authorized by the budget shall, from time to time, be fixed by the board of directors.
10. To ascertain currently that the properties of the corporation are properly and adequately insured.
11. The initiation, preparation, and issuance of standard practices relating to all accounting matters and procedures and the coordination of systems throughout the corporation, including clerical and office methods, records, reports, and procedures.
12. The maintenance of adequate records of authorized appropriations and the determination that all sums expended pursuant thereto are properly accounted for.
13. To ascertain currently that financial transactions covered by minutes of the board of directors and/or the executive committee are properly executed and recorded.
14. To maintain adequate records of all contracts and leases.
15. To approve for payment (and/or countersign) all checks, promissory notes, and other negotiable instruments of the corporation which have been signed by the treasurer or by such other officers as shall have been authorized by the bylaws of the corporation or from time to time designated by the board of directors.
16. The examination of all warrants for the withdrawal of securities from the vaults of the corporation and the determination that such withdrawals are made in conformity with the bylaws and/or regulations estab-

lished from time to time by the board of directors.

17. To prepare or approve the regulations or standard practices required to assure compliance with orders or regulations issued by duly constituted governmental agencies.

The fact that I do not choose to dwell upon any or all of the subjects contained in that list is not because I do not agree that the list fairly represents the duties and responsibilities of the controller, but rather because I am aware of the fact that I am addressing a group in which the vast majority are corporation officials, for the most part accounting and engineering, or heads of departments in corporations, and therefore know, as well as I do, the duties and responsibilities which ordinarily fall upon the shoulders of the controller. In the circumstances the list needs no amplification by me.

I believe that we would spend our time to better advantage if I discussed, as briefly as possible, a duty and responsibility which does not appear on that list, namely, the responsibility which the controller has with respect to his organization and himself and when I use the title controller I refer to the chief accounting officer even though he may not be called the controller in his company.

The Controller—As a Human Being

A controller is and he never can be rated any better than the organization of which he is the head. If he is a "stuffed shirt" then you are very apt to find many stuffed shirts in his organization, in other words, you are apt to find that he has no corner on that characteristic. If he has the technical qualifications for the position he holds but is lacking in his ability to size up the individual members of his organizaton or those applying for a position in it, or to know, understand, and respect such individuals as fellow human beings, then, in my opinion, he is destined to failure. On the other hand, if he has had the proper training and experience so that he knows his own job, and if he has spent enough of his life in an attempt to understand human nature to a point where he is able to appraise individual character, integrity, capacity, ambition, perseverance, etc., you will usually find under him an efficient and competent organization; an organization which can be depended upon to meet and cope with any emergency.

And right along that line, may I say that it is not enough that he set up a good organization and then proceed to rest on his oars on the theory that it will run itself; he must make it a part of his own job to see that its efficiency is self-perpetuating, and that can only be done by retaining the interest of the members of his organization and by exercising extreme care in the selection of new members. He must insist that those of his organization who have authority to hire people should regard that phase of their duties as the most important.

He should confine the responsibility of hiring people to as few members of his organization as possible and insist that no one be taken into it unless the applicant measures up to the proper standards. I have always regarded the hiring of an office boy as an important job. Evidently that wasn't so important thirty odd years ago, because that's where I started, in spite of the fact that the program states that I started as a meter reader.

The great trouble with getting careless about hiring people for minor positions is that if an incompetent individual gets into the organization at the bottom he will get just so far and the first thing you know is that he becomes a stumbling block to progress, and when a more competent person is advanced in place of him, he becomes discouraged and possibly disgruntled. That wouldn't be so bad if he kept it to himself, but he never does. His dissatisfaction spreads to those around him who have not developed sufficiently to be impervious to his influence, and then the controller finds himself confronted with a situation requiring a major operation, which must be performed if the organization is again to function smoothly; an operation which might have been avoided if care had been exercised in the selection of the individual in the first place. I regard it as a part of the controller's job, and by the way a very important part of it, to see that the members of his department are given opportunities to increase their knowledge, for example, by offering financial aid for educational courses, discussion groups, etc., and thereby prepare for promotion.

In other words, a controller should not only be trained in finance, accounts, taxes, budgets, etc., but of equal importance, he must know and understand human beings. As a matter of fact, his interest in them must be genuine; it must be a natural desire on his part to know and understand them. A synthetic desire will not do.

The Controller—As an Executive

While this requisite of a controller is of tremendous importance in any industry, it seems to me that it is even more important in the public utility industry. Why?

Because the controller is one of the executive officers of the company; he is a part of its management; as in most other industries but in the Public Utility Industry his department, from the standpoint of the number of employees, is one of the major departments. These employees — generally speaking — have relatives and friends all of whom are citizens in the communities his company serves. What I am getting at is that here is an army of representatives of our industry that, as a general rule, know less than they should about the background of the industry upon which they are dependent for a livelihood.

Time will not permit me to discuss the importance of the human side of the controller and his ability to understand the other fellow's point of view when he is dealing with outside agencies, such as the general public, governmental agencies, banks, underwriters, etc., but I should like to spend a moment or two on the importance of having the members of his organization know something about the history of the industry in which he and they are employed, a phase of his duties, as well as those of his brother officers, which I do not believe has had the attention it deserves.

In connection with that thought, may I speak rather broadly and suggest this: Anyone who regards himself as being familiar with the Public Utility Industry will, I believe, readily admit that all the more rigid and extreme Federal and State regulations and requirements under which we now operate came into being since 1929, the beginning of the depression. Some of these new regulations or requirements I believe were necessary; others were not. While the Federal Trade Commission Investigation was started prior to 1929, the collapse of the security market in that year focused public attention upon it. That investigation was the forerunner of the Holding Company Act and the amendment to the Federal Power Act. The Mack Investigation in New York State was the forerunner of the more recent amendments to the Public Service Commission Law. Without attempting to characterize these investigations one way or another, because this is not the time nor the place for it, I suggest to you that the effect of the publicity attached to certain isolated instances disclosed by these investigations was to lower drastically the public esteem

in which our industry was held to a grade far below that to which the industry as a whole was entitled. To contend that we didn't deserve some criticism, as well as some corrective legislation, would be foolish and idiotic. But right here I should like to say that one of our greatest mistakes, as an industry, was to attempt to defend, either by silence or otherwise, every act of the whole industry, because such a position was untenable. We should have made certain admissions and explained them. No job the size of the one done by our industry was possible without having made certain mistakes. In that respect our industry is no different from any other successful industry. In this connection, did it ever occur to you that no one could in good grace defend every act of the Twelve Apostles, because there was, as you know, a Judas Iscariot. St. Peter himself denied Christ; St. Thomas once doubted Him, and eleven of them slept when He was alone in the Garden of Gethsemane.

How long this industry in which you and I are spending our lives will continue to be treated as a political football I don't know, but I believe that the trend of public opinion is on its way upward. As a matter of fact, it has been ever since these investigations ran out of startling disclosures and ever since the public realized that such disclosures represented the exception and not the rule of the industry generally.

Now what has all that got to do with "The Controller's Job—What is it and Why?" Simply this: That the controller, being a part of the management of the company and the head of one of its major departments, must do his part, along with the other executive officers, to keep the trend of public opinion on that upgrade until we have not only regained the public confidence we once had, but have acquired more than we have heretofore enjoyed and that which is commensurate with what we have earned and therefore deserve.

The Controller's Place in Industry

When I think of the place in public opinion we should occupy and compare it with the one we do, I can't help but feel that we have fallen down a bit, and I can think of no better way in which to illustrate what I have in mind than to tell you about an experience I had in the City of Buffalo the early part of last year:

One evening as I was standing in the lobby of the Statler Hotel a friend of mine came along, took me by the arm and said, "Come on, Frank, I want you to come with me." I, having nothing to do, went along. He took me into the ballroom which was packed with people, two-thirds of whom were men. At the end of the room there was a stage and the show was already well under way. That show was a performance given by the Cornell Glee Club, and I am perfectly sure that the vast majority of those in attendance were Cornell Alumni. At the close of the performance the Glee Club and the audience joined in singing their beautiful Alma Mater, "Far Above Cayuga's Waters," and I joined them in their song.

Those men did not have voices which a vocal teacher would regard as good, but they sang with a deep sincerity. One could very easily tell that they loved the institution in connection with which that song was associated. Yet they spent only four short years of their lives in that institution.

I was deeply impressed and that evening as I was preparing to go to bed I was for a moment or two a bit envious, because I had never attended college. I realized that while I sang "Far Above Cayuga's Waters," I was not a qualified member of that chorus. I did not belong in that scene. And then that feeling of envy left me and I smiled as I remembered and said to myself, "Why I, too, have an Alma Mater. My Alma Mater is The Niagara Falls Power Company, the pioneer in hydro-electric power; my Alma Mater is the Power Industry of America." And like those who sang, I love that industry and offer no apology for doing so. It is both my high school and college.

Look at its record. Why that industry revolutionized the industrial world—to a great extent it revolutionized the social world—it made enormous contributions to the advancement of practically all the sciences—it entered every nook and corner of the houses in which people live, of the offices, factories, and shops in which people work—it lightened the burdens of men and women the world over. No other industry in the history of man contributed so much to his comfort—so much to his enjoyment. We are accused of having made mistakes. Did anyone ever accomplish so much without making some? We are confronted with the accusation that we have had a few leaders of national prominence in our industry who were not what they should have been. Is that an indictment of all other leaders, past or present, any more than the act of Judas Iscariot is an indictment of the acts of the other eleven Apostles, or their successors, or any more than the dishonest act of one member of a president's cabinet is an indictment of all cabinet members, past or present?

People the world over come to see the creatures of the brains and hands of those responsible for the power industry's existence, including presidents of our own country, kings, queens, nobility of all kinds, from other countries in the world; scientists, engineers, statesmen, and others of equal rank. In the visitors' register of The Niagara Falls Power Company you will find internationally famous names of the past and present—that register is a veritable "Who's Who of the World."

And then another thought came to me: "Why should we love an institution, such as a university, in which we spend four short years of our lives, more than an industry or an institution in which we spend practically a lifetime? Why should we not love that industry quite as much?" An industry in which we rub elbows with men and women with whom we live, with whom we work, with whom we play, and with whom we share each other's joys and sorrows—an industry for which men have given their lives that it might progress—an industry in which men and women have entered young, have grown old, and have died. Why should not that feeling of deep affection and loyalty for that industry be found in the heart of every man and woman in our organizations?

Do you wonder that I should feel that we have fallen down a bit, if that disposition is not there? Do you wonder that I suggest that helping to put it there is a part of an executive officer's duty? If it is not there, should we not do something about it? Not, if you please, for mercenary reasons, but rather because it belongs there. We have, and still do, put enough of our brains into this industry—let's put more of our hearts!

I believe that if that feeling of warmth, color, and affection were in your heart and in mine, it would only be a question of time when it would seep through the entire organization on out to the citizens of the communities we serve, and then, figuratively speaking, when we stood up to sing our Alma Mater, those citizens would join with us, as I did in singing "Far Above Cayuga's Waters" and then perhaps those citizens once again would rate us in the honor group as they did

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Control, Procurement, Storage, and Inventory of Supplies in the Navy Department

By Captain Arthur H. Mayo, (SC) U.S.N.

An address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 14, 1939

THE Navy Supply System is organized to supply our Fleet, which, built and building, is planned to cover the fundamental Naval Policy of the United States. This policy is, "to maintain the Navy in sufficient strength to support the National Policies and commerce, and to guard the continental and overseas possessions of the United States." This mission requires a far-flung system of supply bases and stations, and an organized general stores department, on every vessel, that is larger than a submarine or destroyer. It requires submarine and destroyer tenders, repair ships, general stores issue ships, cargo transport ships, oilers, and refrigerator ships. It necessitates strategically located supply points both on the continent and in our overseas possessions.

The Bureau of Supplies and Accounts, of the Navy Department, exercises control over this vast system, and formulates the policies and plans under which it operates.

Decentralization is definitely a necessity. Each supply officer, ashore or afloat, determines the kind and quantities of supplies, to be carried by the supply department under his charge. However, he has three basic guides: the Federal Standard Stock Catalog (Navy Supplement), which tells him what is standard stock; the ships' allowance lists of equipage which inform him as to what items of equipment are permitted to a ship, and in what quantity; the Bureau's assigned replenishment formula, which limits the quantities that may be carried in stock.

Let me discuss these in order. First, the Standard Stock Catalog, which lists in alphabetical arrangement, all standard items of supplies, indicating the class for storage and issue, the group for procurement, and the specifications applying thereto. Under each class also appears each item of supplies, the specifications, standard nomenclature, stock numbers, approximate prices, and code words to facilitate placing of orders by radio or telegraph.

The Navy and the whole Government service are indebted to Rear Admiral T. H. Hicks, S.C., U.S.N., Retired, for our Federal Standard Stock Catalog. He gave us standardized nomenclature based upon a scientific system, and he fathered the Catalog to completion and adoption.

* * *

The first assumed prerequisite, to accuracy of statement, is a common nomenclature. To attempt to lay the foundation for definiteness of expression in specifications; to provide the means whereby each agent of the Government can comprehend exactly what is meant by the other; to make understandable entries on each document and record, requires that all things, which are the subject of purchase, be clearly defined and classified. This classification is fundamental to accuracy of statement and lies at the foundation of intelligent direction and control.

Generally, an item is called by any one of several synonymous names. The Federal Catalog establishes a standardized system of nomenclature, upon the basis of which the name of each article is determined, and the use of synonyms avoided. The first word, of the nomenclature of each item, is the noun, which names it in the broadest manner. This is followed by modifiers, in the order of their extensiveness in qualifying the meaning of the generic term.

Ships' Allowance Lists of Equipage

These are prepared by the several technical and operating Bureaus, and list the items of equipage, in the allowed quantity for the particular vessel. This represents the equipments that may be drawn by the vessel as "Not in Excess of Allowance" and which the Bureaus consider as necessary for its operation and which they are prepared to maintain from their appropriations. These lists are used by the ships, in preparing their requisitions, and, by the supply points, in checking the requisitions, before filling them.

Replenishment Formula

The basis of this formula is past experience, that is, past issues, with provision for the consideration of known future out-of-the-ordinary demand. Adherence to the formula is of utmost importance, since it is the Bureau's principal control of procurement, and is a guard against the obtention of excessive quantities of stock which would later have to be transferred to other stations for disposal at an added freight cost, or even have to be sold (if the material should become obsolescent) at considerable loss. This formula is as follows, and has application to all major stations: Past 18 months' issues, plus twice the obligations, minus the quantities on hand and due, equal the amount to be requested—subject, to due allowance for any known increase or decrease in requirements. This formula would give about a twelve months' maximum stock. In applying the formula, it is necessary that stock upkeep personnel distinguish between routine and non-recurring issues, and disregard the latter.

The formula does not apply to minor stations or ships. The former are assigned a monetary total stock limit to keep them in line, while the latter are limited to 9 months' actual stock and are required to replenish all items to that quantity, whenever proximity to a supply yard offers the opportunity.

One exception to the replenishment of items by the formula is certain material, the issue of which is irregular and dependent upon casualties to vessels. Some of the items are anchors, chain, propellers, turbine blading, condenser and boiler tubes. Regardless of issues, a minimum stock of such items must be maintained, in order that a vessel having a casualty may be promptly returned to the Fleet. For these items a definite maximum and minimum stock is fixed, and the control is centralized in Washington. Reports called "Change of Material Sheets," are made when the stock status changes, either through receipts or issues, and replenishment is as directed by the cognizant Bureau.

The stock of general supplies is financed by the Naval Supply Account Fund, which is a revolving fund with a value, at the present time, of approximately $73,000,000. Instead of obtaining stores, of common use, direct under a particular Bureau's appropriation, all requirements are pooled, and procured under this fund, for ultimate charge to an appropriation when actually issued for use. This results in lower stocks than were necessary when each Bureau maintained its own stock pile. It also provides a means by which balances may be carried from one fiscal year to another without the necessity for augmenting operating appropriations for that purpose. The Fund does not, however, attempt to finance ordnance, aviation, and other technical supplies which are subject to rapid obsolescence. The values of such materials are enormous, and the danger of loss is too great for the Fund to assume. Those materials, for accountability purposes, are after purchase, carried in a stores account, known as the Appropriation Purchases Account.

There are naturally some losses to the Naval Supply Account Fund, due to obsolescence, deterioration, and handling. To provide against depletion of the Fund through the steady drain incident to such losses, a surcharge of one per cent is made in calculating the issue price, and the price is rounded off to the next higher unit, according to the following Table:

Unit cost of article	*Prices to be fixed at*
Less than 10 cents	Next higher mill
10 cents to 25 cents, incl.	Next higher half cent
Over 25 cents to $100	Next higher cent
More than $100	Next higher dollar

An exception is also made as to special material for shipbuilding purposes. This material, while purchased under the Naval Supply Account Fund, is, upon receipt, immediately charged to the appropriation, "Replacement Naval Vessels," and taken up for accountability purposes in a special stores account known as the RNV Stores Account. The reason for this exception is that the amounts involved are too great for the Naval Supply Account Fund to attempt to finance beyond the period of purchase.

The Stock Division of the Bureau of Supplies and Accounts acts as a coordinating agency for supply departments in the field, to secure the advantages of uniformity of policy, consolidated procurement, exchange of stock, and contact with the technical Bureaus. It obtains early information, of changes in specifications and designs, in order that stock of old design may be issued, before the new design is procured. It obtains necessasy guarantees, for new items stocked for a particular Bureau, on which there may be a question of probable future loss. This Division maintains no stock records, other than a file of excess stock reports. It depends upon the cooperation of supply officers in the field, in carrying out stock policies.

The Division keeps a measure of control, by means of action taken on procurement group requests, requisitions, surveys, excess stock reports, and by examination of the balance sheets of stock classes submitted quarterly by the activities.

Carrying points, and distributing points, have been established for the purpose of reducing the amount of money tied up in stock on items of considerable value, which are necessary, but of infrequent use. These items are not carried by other activities, but can be procured by transfer, when necessary.

Certain of the principal supply activities have been designated as main yards, while others have been named subordinate stations, dependent upon a particular main yard. On the East Coast there are six main yards; on the West Coast, two.

The 89 classes of material, are divided into five arbitrary groups, each of which comes up for replenishment twice yearly. No attempt is made to stock all items of material used by the Naval Service. Material stocked is confined to (a) material for which there is a recurring demand; (b) material which, while of only occasional use, is peculiar to the Naval Service; (c) material required because of military necessity, for emergency repairs.

The principal means for stock replenishment and control is what is known as the "Procurement Group Request." These are blanks sent out by the Bureau to the main yards as the respective classes covered thereby come up for replenishment. The yards fill in the stock status and the quantity requested. The subordinate yards send their requests for stock and their excess stock reports to the main yard upon which they are dependent, to arrive 30 days before the date set for the submission by the main yard of the semi-annual procurement group requests to the Bureau. An exception is as to carrying point items, when some main yard, other than the one to which the station is dependent, is the named carrying point.

The main yards, distributing points, and carrying points, fill the requests or requisitions from the subordinate stations, by shipment from stock, except where the quantity is sufficiently large to warrant purchase for direct delivery.

When the procurement group requests reach the Bureau from the main yards, they are checked against the Bureau's excess stock records. The quantities to be purchased are determined. The requests then are forwarded to the Bureau's Purchase Division for action.

Procurement

Procurement is by one of the following methods:

(a) From stock at another naval activity.
(b) Manufacture at a Navy Yard.
(c) Transfer from another Government Department.
(d) Order from Prison Industries, Incorporated; National Industries for the Blind, Incorporated; or mandatory schedules of the Procurement Division, Treasury Department.
(e) By purchase.

I take it that you will be principally interested in the Navy purchasing system, since the other methods of obtention used by the Navy are not open to commercial activities.

From a business point of view, all purchasing for any single-purpose organization should be centralized in one office, and the Navy adheres to that principle, in so far as practicable.

One difference between Navy and commercial purchasing is the degree of publicity given. Awards are made on bids, publicly invited and opened, and without subsequent negotiation with the bidders. An exception is material purchased for experimental purposes, and proprietary material, where there is a single source of supply, and where competition cannot be had. The law requires newspaper advertisement. In addition to newspaper advertising, a bidding set is mailed to each firm on the Bureau's mailing list, composed of manufacturers and regular dealers, for the class of material to be purchased.

The Purchase Division of the Bureau consolidates the Procurement Group Requests into schedules which contain all essential information as to quantities, specifications, delivery conditions, exact time of opening bids, etc. The various items are grouped into lots, by grades or industries, to enable each bidder to bid on each item in a lot, and thus permit, as far as possible, award by lot, rather than by individual items. This simplifies award and encourages quantity prices, making the business of the Navy more attractive to the bidders.

On every purchase the purchasing officer must certify that the award was made to the lowest bidder or that the material offered by lower bidders did not meet the advertised specifications in essential respects, which must be definitely stated. This eliminates all chance of personal preference or of accepting a bid which offers a higher grade of material when there is a low bid complying with the minimum requirements of the advertisement. An award based on an evaluation of the bids received, may be made only when the basis or formula for evaluation is advertised in the schedule and known to all bidders.

Materials whose prices are subject to market fluctuations, due to speculative conditions, or irregularity in supply and demand, such as tin, copper, or shellac, are purchased only after a study of the market trend indicates that prices are advantageous to the Government.

Certain materials which are less subject to rapid market fluctuations, and which can be procured on short notice, or which are perishable in nature, are purchased under running contract for delivery on short notice. These contracts cover periods of one month, three months, six months, or sometimes a full year. Some of the materials are lubricating oil, fuel oil, gasoline, packings, and provisions.

Tinned provisions are purchased annually at the packing season for each product.

Purchases of coal are made only from mines which have been inspected by the Bureau of Mines at the solicitation of the Department, to determine whether the quality of coal meets the Navy specifications and will probably be maintained.

The very foundation of the successful conduct of a purchasing department rests upon the right specifications. Every effort is made to have the specifications of schedules clear, definite, and complete.

To facilitate the purchase of satisfactory materials, in cases where the time required for complete test is so great as to delay delivery, or where the cost of inspecting each delivery is prohibitive, or where the necessary tests require complicated or expensive testing apparatus not in general commercial use, or when the technical requirements cannot be fully described by specifications—an Acceptable List has been established. This is a list of approved materials. It is confidential, and the results of tests of a manufacturer's material are never divulged to others. By each purchase schedule, manufacturers, who have not had their material approved, are encouraged to submit their materials for test. This in order that competition may be encouraged. The necessary quantity of material for tests must be supplied free of charge, and when the cost of test is more than nominal, a deposit must be made by the manufacturer to cover the actual cost involved in testing his own material.

Some material, including hack saw blades, chisels, grinding wheels, tool steel, and crucibles, are purchased on the basis of work value; storage batteries on guaranteed cycles; and dry batteries on performance units.

Unfortunately, there are some bidders who will accept a contract, and then attempt to deliver material of inferior quality, not meeting specifications. The only remedy is a rigid but fair inspection. To insure such an inspection, the Navy has located Inspectors of Naval Material, with competent staffs, at strategic points throughout the country, in order that the inspection may be made, at the plant where the material is manufactured. This is, obviously, in the interest of both the legitimate manufacturer, and the Navy, since it eliminates transportation delays, and expedites replacement of unsatisfactory material.

Local Purchase

In order to make the Navy's procurement system, sufficiently elastic, to meet the needs of the service, material required for immediate issue, which is not in store, and which cannot be obtained from contracts in force, may be procured by the local activity, without reference to the Bureau. Also, the Commandant of any activity is authorized to approve for purchase any emergency requisition.

Restrictions

All Government purchase systems are handicapped to some extent, by laws which Congress has seen fit to enact, for the protection of the public interests, or to accord with public policy. Some of these are the Eight Hour Law, the Walsh-Healey Act, the Vinson-Trammell Act, and the so-called Buy American Act.

Storage and Inventory

The storage plan provides, that the physical arrangement of property in storehouses, shall conform to the classification and alphabetical arrangement, of the corresponding items in the Stock Catalog; and that items, or sizes, not listed in the Catalog, be interpolated in their proper places.

The system is thus designed to realize the major objectives of material control:

(a) To secure immediate accessibility of each item stored, with ready identification thereof.

(b) To obviate the necessity, for antecedent familiarity, with the material handled, on the part of personnel operating the issue system.

(c) To facilitate prompt and accurate inventory.

Each article is assigned a standard stock number. This number is made up of three portions: (a) The class number; (b) The initial letter of the name of the article; (c) The serial number. These serial numbers are so assigned that the items in each class under each letter are arranged in numerical order, i.e., the system of arrangement is alphabetical-numerical, so that any item may be readily located, either by its nomenclature, or by its stock number.

Of necessity, every storehouse must contain many non-standard articles not in the Catalog. The numbering of these articles is cared for by interpolating them among the Catalog items, then applying appropriate serial numbers.

Inventories

The system of arrangement, and cataloging of stock, which has been outlined, permits accurate and economical inventories. If an arrangement of stock corresponds exactly with the order of items in stock records, and when identical stock numbers, and nomenclature, are used in each case, it is obvious that the taking of an inventory, becomes a simple matter—only the accurate counting of the physical stock being requisite.

The cost of taking the Navy's inventories is comparatively negligible. Ordinarily, at each activity only one or two employees are engaged primarily upon inventory work, and in the rectification of discrepancies discovered. Employees normally engaged in other work are detailed to the inventory squad according to a monthly schedule, which provides for the annual counting of each item of stock. When a class comes up for inventory, all stock cards concerned, are impounded by the chief bookkeeper, and removed to his section, where custody is retained until final proof of correctness, or the definite existence of a difference, is found. The counters have no knowledge of the items or quantities and therefore an actual physical count must be made. The standard stock stowage, both of retail bins and bulk stock, is by stock numbers, which gives the best possible arrangement, for inventory purposes.

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Proved Economies in Commercial Accounting Operations

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An address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 14, 1939

OUR company like many electric utility companies is the outgrowth of a street railway company. For many years, the railway end of the business required most of the attention. Development of the electric light and power utility started about 1910. In 1921 the electric utility began to show very substantial gains annually in the number of electric customers. During the five-year period ended December 31, 1925, more customers were connected to the company's system than during the preceding twenty-eight years. Naturally, during this five-year period we experienced severe growing pains.

Prior to 1921, the growth was gradual and the increase in the customers could be handled by adding employees, but when the number of customers more than doubled in a five-year period, we saw the necessity of giving consideration to improvements in accounting procedures and facilities. We realized that the problem brought about by our more rapid growth would continue to plague us, for we believed that our business would continue to expand. In consulting our sales department we learned of a contemplated long-range program to obtain substantial annual increases in the number of customers with an objective of a quarter of a million customers on service within the next ten years. In addition, our sales department voiced the opinion that millions of dollars would be spent by these customers on major electric appliances most of which would have to be sold on the installment plan. On the basis of this information we concluded that we were not only faced with the expansion problem which had rapidly crept upon us in the preceding five years, but that we also had the estimated expansion of the next ten years to consider.

An analysis of the entire problem resolved itself into a number of definite objectives. There was the matter of acquiring suitable office space which would be readily accessible to the customer and to the records; an office sufficiently large to allow for future expansion tentatively set at 100 per cent. Our office practices required modernization. The manual methods which were outmoded and uneconomical would have to be replaced by machine methods. The selection of supervisory and productive personnel would have to be placed on a scientific basis. An educational program to train and maintain a well informed personnel would have to be developed. Procedures, practices, and policies would have to be reformulated to improve customer relations and take account of the increasing requirements of regulatory commissions. Last but not least, an efficient system would have to be developed which would keep our costs of operation at a minimum.

With the foregoing objectives we proceeded on a program of economy and modernization. How successful we were in accomplishing our end is a matter of record. Our labor cost per bill for 1938 was 9.78c. as compared with 10.68c. in 1926, the first year in which detail cost records were maintained. This overall economy was achieved in spite of the fact that the average hourly wage rate was increased from 58.56c. in 1926 to 78.36c. in 1938. This increase is due in part to increased base rates and to a reduction in the working hours to 40 a week.

It is my opinion that you are primarily interested in what steps we took to accomplish these economies. At the outset let me say that there is no royal road to effecting economies. It is rough and full of obstacles, pet ideas must be dropped, prejudices must be overcome, and (the hardest problem of all) employees' habits of performing their work must be changed. However, in order to keep abreast of the times and effect economies, changes must continually be made. What is the best method today may be obsolete tomorrow.

In initiating an economy program do not expect phenomenal savings. As will be pointed out from time to time in this discourse, total savings are the accumulation of small savings or as some one put it "picking up pins." No well supervised system is so wasteful as to be subject to great economies. On the other hand no system is so perfect as to preclude some improvement.

The accumulation of small savings can best be illustrated by the fact that during a 12-year period our net overall saving amounts only to one cent per bill per month, but when we consider that 2¾ million bills are rendered each year, it amounts to quite a sizable sum. Such savings are repetitive. We are of the opinion that over a similar period, most companies, if they followed no economy program, will show an increase in accounting costs. The small savings are accomplished only by an organization which is tuned to making changes to hold operating costs at the prevailing level or to lower them and to defeat all causes which tend to bring about increased costs.

The changes which were a part of our program of economy can be grouped in five significant types. We consider each a vital link in our organization bearing an equal portion of any credit in the final accomplishments. In the few minutes allotted, I must necessarily hit only the high spots and accordingly ask your indulgence.

1. Organization of Development Group

Our first step in the economy and modernization program was to determine what changes in accounting practices should be made.

The work supervisors were consulted, and it was evident that they were unable to give much attention to the problem because all of their time was consumed in directing operations. This

necessitated the organization of a development group which could concentrate on the development and installation of changes designed to effectively produce improvements and reduce accounting costs. The organization of the development division is patterned after the organization of a modern manufacturing plant. No manufacturer would consider leaving improvements of design, material, or methods to a shop foreman or a machinist. Most accounting offices, however, depend upon work supervisors for the development of improvements in accounting methods and procedures and for the installation of such improvements. Our development group is entirely separate from the operating organization and is the accounting counterpart of the manufacturer's engineering and planning department.

The development division was subdivided into groups corresponding to operating groups of the customers' accounting division. Ultimately a man was assigned to the meter reading, bill delivery, credits, collections, billing, bookkeeping, accounting machines and rates, rules, and regulations. This arrangement required that the man assigned to each group would have to become a specialist in his particular field. He would be entirely responsible for all improvements and reduction of costs in the division to which he was assigned. The work supervisor was relieved of the responsibility of making improvements and installing them. It, however, placed a greater responsibility upon the work supervisor for producing a higher quality and a larger quantity of work, for the strict adherence to the newly established methods, rules, and regulations, and for the improvement of public relations in the customer-contacts of his division.

It can be seen that the development man, while not a part of the operating division, was closely associated with the work supervisor, and that the work of the two was so closely interwoven that it required the highest degree of cooperation to accomplish the desired results. It was obvious that employees selected for this work must possess certain qualities such as an analytical mind and the ability to sell the changes not only to the work supervisor but to the employees as well. It was essential that each development man know the operations of the division as well or better than the work supervisor, otherwise he would not be able to cope with the objections, pet schemes, and other obstacles that would be forthcoming from the operating division.

The development division, in addition to the study of accounting practices to effect economies, is responsible for the follow up of changes previously made to see that they remain in effect and are not deviated from because of variations in personnel or for other reasons. It is also responsible for periodic audits to insure strict adherence to rates, rules, and regulations ordered by regulatory commissions. The division likewise has the responsibility of certain internal divisional audits such as employees' production reports, upon which bonus payments are made, postage used, customers' deposits, and other miscellaneous items. The development division assumes responsibility for all accounting analyses requested by regulatory commissions and for special analyses required by the management because of major changes in accounting policies. Such analyses and investigations in the past were assigned to operating divisions to be absorbed in their regular daily work. This change relieved the operating division of the responsibility of assuming work foreign to its general activities. The absorption of such special work affected their production and accuracy, frequently disrupting their working schedules, and requiring unreasonable amounts of overtime, all of which made for less efficiency and higher costs. Such conditions were eliminated by the development group which, as trouble shooters, are always available to absorb special or emergency peaks.

The cost of operating this division is charged to the accounts that obtain the benefits of the work performed. The results of their efforts are labor savings that are repetitive. Such savings must and do justify its existence. We feel we could not afford to be without one. The ultimate analysis of the work performed by this group shows it is not an additional expense but a major portion of our economy.

The benefits derived from the development group in its infancy indicated that its activities should not be confined to customers' accounting alone but that it should be ultimately, and since has been, extended to other divisions of the accounting department.

2. Selection and Training of Supervisory Employees

While organizing the development group and placing into effect some of the changes which were recommended, we saw the need for supervisors of greater ability. Most of our supervisors could satisfactorily operate their groups provided the prevailing practices remained in effect or only minor changes were made thereto. However, we had to have men who were sympathetic in their views toward major changes in operating practices and who were capable of assuming increased responsibilities and keeping pace with a greatly accelerated, high-speed organization. On top of this, the change from a unit plan of operation to that of a specialized plan with increased production and increased accuracy affected the attitude of the personnel. The qualifications of the supervisor then were increased. He had to be a person who could adapt himself to the changes for improvements and who could handle the accompanying personnel problems with patience and an unlimited amount of tolerance so that the good employee relations which existed in the past would continue.

Realizing that we were confronted with a serious problem in our supervisors' ability, the second step in our economy and modernization program was apparent. The supervisors were assembled to receive an explanation of our program and to contribute their suggestions toward its development. In order to determine their full qualifications, we called on the services of our educational department psychologist who had been engaged in employee selection work for other departments. The reports from the psychologist and the educational director indicated that some of our work supervisors lacked the ability required of work supervisors in a high-speed, productive accounting organization. All of these men were loyal, honest, and steady employees of long standing, but we had apparently loaded our staff, as the system grew, with some rank and file men who, for the most part, were limited with respect to the expanding accounting system which we contemplated. In other words, the system was outgrowing the ability of the men to handle it. Those who did not have the ability were shifted to positions of less responsibility. Vacancies were filled with qualified men by promotions from within the division, transfers from other divisions or departments, or with new employees. Revisions to operating procedures were worked out by the development man and discussed with the work supervisor, who indicated correc-

tions, additions, and finally approved their adoption. At stated periods, individual meetings were held with the work supervisor, his assistant, and the respective divisional development man. Also at stated intervals, collective meetings were held with all supervisors and all development men. These meetings served to keep the entire organization on its toes and brought forth valuable suggestions. These individual and collective conferences stimulated an esprit de corps that to date remains an important factor in the continued success of our economy program.

These conferences made it apparent that some method of measuring the work supervisor's and the development man's effectiveness had to be established. The best measurement was on the basis of pay roll costs and the number of employees in service. Payroll expenses for each division were budgeted and comparisons made between the current month, preceding month, and the corresponding month of the previous year. Each supervisor and development man knew exactly where he stood at all times and was held strictly accountable for differences or fluctuations of labor expenses in his group. This arrangement provided an efficient means of controlling costs. It set up an organization which was progressive and willing to experiment with new methods. The supervisors were open-minded, taking and giving suggestions, all eager for improvements, and all realizing the importance of their responsibilities. To continue the cost in a downward direction we took the third step in our economy program, which was the selection of proper employees for each supervisor.

3. Selection and Training of Rank and File Employees

In placing the developed procedures in effect, certain employees were found to be able to handle the new operations with considerably more ease than others. In those cases where employees were unable to perform the new assignments, the employee was referred to the educational department psychologist for a report on his ability, so that we could determine the best position in which to place him in the organization. This left vacancies for which new people had to be selected. The old method of having the division head personally interview candidates had to be dispensed with and selection had to be made on a more scientific basis. This required that we again call on the psychologist. The jobs were studied and specifications of the requirements were prepared. In order to prepare these specifications, the most satisfactory employees were used as a standard. It was then necessary to obtain candidates for these vacancies who could meet these standards. We found that graduates of high school commercial courses provided a fertile field from which we could draw. Students who were outstanding their classes were invited to take the educational department tests. Those who passed the highest test were selected for employment. These graduates are particularly desirable because it is their first job. They had no previous opportunity to form any habits, good or bad, which would have to be unlearned.

The second part of the personnel problem was caused by shifting employees from one occupation to another who had not satisfactorily performed the work previously assigned to them. This resulted in their wages being out of line with that commensurate with the new position. This second problem was overcome, to some extent, by the natural turnover and by requiring people to perform work equivalent to their wage scale or making the necessary adjustment to bring the wage in line with others doing similar work.

The third part of our personnel problem was to lay out the proper educational program and to supplement it with job manuals to facilitate the advanced training of employees for promotion when openings occurred in the next higher wage classification.

The fourth part of our personnel problem was the establishment of production and accuracy standards with a beginning and final rate to be paid within a reasonable period after the individual met the requirements of production and accuracy set for the position.

The fifth part of our personnel problem was the conversion of existing group wage incentive plans to individual plans. This permitted the measurement of the individual's work and placed each employee in a competitive position for promotion.

When the five factors operate simultaneously, the result is a highly productive and efficient organization striving to produce more satisfactory work for promotion and higher wages. Good employee relations exist because no one is receiving a wage in excess of that specified for the position. The employees know that there is no partiality shown or preference given, as the supervisors have no control in making promotions or changing wage rates. These decisions for promotions and wage changes are based on established records which form the basis for wage payments.

4. Gain Sharing or Bonus Plans

Wage incentive plans have been in effect in our company for many years. These wage incentive plans were, for the most part, group plans which paid the average earnings of the group to each employee, and frequently resulted in overpayments to the low producer and underpayments to the high producer, whereas individual wage incentive plans paid employees exactly what they earned. As the jobs were now on a specialized basis, bonus paid in each specialized group permitted the establishment of production standards. These standards in turn were used in the application of starting and final wage rates and became the basis of promotion from one occupation to another.

Consolidating these factors into the wage incentive plan stimulated all employees to maintain the highest standards possible. This decreased the attention the work supervisor was required to give each individual and permitted him to assist with development work, and follow through operations in his department similar to that of a production man in the production department of a manufacturing concern.

In the establishment of bonus plans, consideration was given to accuracy components so that accuracy is not sacrificed for speed. Probably the best example of this is in the machine billing operation, where approximately 60 per cent of the bonus paid is based on production and the balance is paid for quality work.

5. Customers' Hall and Accounting Office

The fifth problem in our economy program was the acquiring of suitable office space. We wanted a location that would be readily accessible to our customers. We also wanted sufficient space to carry on the activities involved in handling all types of customer inquiries from the original application to the payment of bills. The space would have to be sufficiently large to house all of these activities because we wanted to avoid sending the customers from pillar to post. Such an arrangement would eliminate the need for time-consuming telephone conversations between separate offices or between floors to obtain complete information. The telephone method requires two persons, whereas the personal method proposed requires only one.

The centralization of these activities, as proposed, would permit the counter man to make a personal inspection of the records and base his decisions on facts that he had observed and not on information conveyed to him by others who were not familiar with all of the details. If necessary, the counter man could show the customer the original records, which could not be done very readily if records were located in various parts of the building.

The space was also to include sufficient private offices and conference rooms in which to discuss business problems privately with our customers. Occasionally some customers may become loud or personal. In such cases, the use of private quarters is particularly valuable.

All of those requirements were outlined to the company's architects, who surveyed the building and designed the quarters. The space selected was completely remodeled at a cost of a quarter of a million dollars. This remodeling provided an up-to-date Customers' Hall and customers' accounting department on the second floor of the company's four-story office building, which covers one city block in the downtown area.

A 200 foot "U" shaped counter in Customers' Hall is divided into various sections and each section is assigned to a different public contact activity, such as applications, credits, collections, bill adjustments, service information, and cashiering. This permits each type of customer's inquiry to be handled by an especially trained employee. Customers' interviews may take place at the counter, at the employee's desk behind the counter, or in adjacent private offices and conference rooms. The commercial accounting and collection office completely encircles Customers' Hall. This complete unit arrangement makes it possible for Customers' Hall employees to handle all customers' transactions to a conclusion and in a minimum period of time. All the customer contact employees are within a short distance, approximately a ten second walk, of the essential customers' records. Both the Hall and the office are large, well-lighted and air conditioned.

The final arrangement provides the best possible facilities in a central location where customers can expeditiously and conveniently transact all their business with the company. In most companies, comparable to ours in size, we have found that these facilities are not centralized. Such an arrangement causes additional expense and delays in handling inquiries because of the telephone method of obtaining information. Our centralized Customers' Hall and accounting office provides us with such facilities as are generally found only in smaller utilities, where all of the activities are located on one floor or in one office. This small town, neighborly method of doing business removed red tape and the fear some people have of dealing with a giant corporation.

6. Employees' Union

Up to this point, you can see that we had made many changes in our operating procedures, personnel, and methods of doing business. Every effort was made with more or less of a free hand in the matter, to get our house in order by systematizing the work and requiring certain standards of accuracy and production. As time went on, however, changes in management policies were taking place. These changes were caused by the depression and new deal legislation. One of the items affecting business management was the expansion of labor unions. One of these unions took a foothold in our accounting department. From the beginning, our attitude was one of cooperating with the unions. We arranged an interview with the business agent and stewards of the union as an overture to subsequent contacts and offered to cooperate with them and assist them wherever possible. We asked them to give us similar cooperation. As a result, a number of conferences followed where complaints and grievances were discussed and settled to the satisfaction of the company and the union.

We also agreed that any changes which affected personnel would be discussed with the business agent and the stewards of the group involved before any action was taken. This precludes any suspicion on the part of the union toward our motives or purposes in making changes. It also eliminates the possibility of small complaints becoming major complaints due to incomplete information. It was also agreed that in discussing demotions, promotions, or transfers of employees we would use employees' production records as evidence on which to base conclusions. Production records of the employees under consideration would be made available to the union representatives for inspection. Invariably the records convince them that proper selection has been made.

This additional management problem foisted upon us through legislation has caused some difficulties, but they generally have been adjusted through a policy of giving and taking. We have also found that considerably more time is required to handle changes because we have to discuss matters with the union in addition to dealing with the employee. We believe, however, that the expense is counterbalanced by the additional benefits derived from cooperating with these union agencies and such cooperation leaves a better and more pleasant feeling with our employees because they have had a voice in the management.

Our commercial accounting and collection department consists of eight divisions—meter reading and bill delivery, credits, collections, regular billing, centralized machine accounting, bookkeeping, special billing, and centralized filing. All of these divisions are under the direct supervision of the auditor of customers' accounts and are more or less inter-dependent upon each other. By having all of the above divisions report to one head, we have obtained certain economies which would not have been obtained if they reported to two or more division heads on an equal level.

This centralization under one division head also permits a greater number of operations to be grouped in jobs and jobs into divisions so that related work is performed in a division with associated work. We believe that a part of our economy comes from the centralization of these activities under one responsible head.

To support our cost of 9.78 cents a bill a month, we have prepared a report in book form of our commercial accounting payroll cost showing each accounting operation by divisions and the total cost for the year. There is the proof of our accomplishment. The report on these costs and other information will be presented at this afternoon's conference of the customers' relations, commercial accounting and collection committee, by Mr. L. M. La Porte, an assistant secretary and assistant treasurer of our company. The customers' accounting division is one of the divisions under Mr. La Porte's supervision. He will be pleased to answer any questions you may have.

It has been a pleasure to have the opportunity of presenting to you the high spots of proved economies in commercial accounting operations.

Coordination of Pension Plans with Social Security Provisions

By M. B. Folsom
Treasurer, Eastman Kodak Company

An address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 15, 1939

IF one had discussed industrial pensions only a few years ago, it would have first been necessary to establish that a company was justified in adopting a pension plan. It is now generally agreed by business executives and industrial relations men that an adequate pension plan is a good business investment. This is borne out by the experience of many companies which have had pension plans for a number of years, and also by the rapid increase in the adoption of plans during the past few years.

We have no exact statistics as to the number of company pension plans in this country, but it is estimated that there are over 900 plans, an appreciable number of which have been inaugurated since the Social Security Act was passed. While these plans cover employees in many important companies and industries, they still cover probably less than 20 per cent of the employees in industry.

The percentage of public utility companies with pension plans is much higher than in industry in general. The reasons are probably that these companies have been in existence for a long period of time and because of their relatively low labor turnover a larger percentage of their employees remain until retirement age. The adoption of pension plans has also been due to the enlightened attitude of the management in this industry, both as to industrial relations and the need for proper public relations.

Companies in business for a number of years find that many of their employees reach retirement age without sufficient means of support. Without a pension plan an employer naturally hesitates to discharge an employee of long service and will probably keep him on the force after he has passed his period of usefulness. This is particularly apt to be the case with a public utility company because of the bad effect the discharge of such an employee would have upon the public which it serves. As a result of this practice, there is a pension cost which is not recognized as such but is buried among the other costs of the business.

It has thus been found to be better business to retire such an employee and replace him with a younger and more efficient worker. An adequate pension plan has a stimulating effect upon the whole organization. It also adds to the reputation of the employer in the community and attracts more satisfactory employees. For these reasons the cost of a pension plan is now generally regarded as a good business investment.

Many predicted that the Social Security Act would cause the discontinuance of private plans and that few new plans would be adopted. This was not the view, however, of others who really understood pension plans or of companies with experience in foreign countries. In the case of Eastman Kodak Company, we have had experience since 1928 with pension plans in this country and in several foreign countries with governmental plans. We had found that these governmental plans, while providing pensions which might give adequate subsistence to those in the lower income groups, were not adequate for the majority of employees. We had therefore adopted plans to supplement the governmental system and our experience had been satisfactory.

The Kodak Company followed the same practice with our plan in this country when the Social Security Act became effective. We adjusted our plan so that the cost to the company remains practically the same as before and the employee received about the same benefit from the company contribution as he previously received, part coming from the Government and part from the insurance company. We have since 1936 adopted supplementary plans for several subsidiary companies.

Before we can describe the methods for coordinating private plans with the Social Security Act and the types of plan now being adopted, it is necessary to summarize the old age benefits provided under the revised Act. The basic philosophy back of the revision was to put the system on a social insurance basis rather than a private insurance basis. The attempt to put the original act on a private insurance basis resulted in the provision for the accumulation of a large reserve fund, and in a formula under which a worker would benefit rather closely in proportion to his contribution. It soon became evident, however that this was not a satisfactory method of meeting the old age problem.

Under the revised plan apparently no attempt will be made to build up a large reserve fund. Eventually the benefits probably will be financed from three-way contributions—payroll taxes on the employer and on the employee, and from general revenues of the Government. Business men are now quite pleased with holding the tax rates at one per cent instead of allowing them to increase to 1½ per cent in 1940. They should realize, however, that the benefits under the revised plan, as under the original plan, may ultimately cost somewhat in excess of ten per cent of the covered payroll. Looking forward to 15 or 20 years from now, the receipts from the three per cent payroll tax on the employer and three per cent on the employee scheduled to be then in effect will not be sufficient to meet the benefits. Additional revenues will be needed from other sources. The present tax, however, will be sufficient to finance the cost for a few years.

Under the revised plan the benefits become payable next year and the benefits to be paid during the initial years will be increased considerably over the original plan. This increase is accomplished largely by using average wages as a base for computing the benefits rather than cumulative wages.

A change was also made in the provision that additional benefits are to be paid to the worker who has a wife over 65. The lump sum payments to estates

of workers who die are considerably reduced under the revised plan but provision is made for allowances to dependent children and widows with young children or widows over 65. Thus consideration was given to the social needs.

Summarized schedules of the benefits under the revised Act are readily available.

To present the problem simply and to show the effect of the revised Act upon private pension plans, let us take the case of a worker with the average monthly wage of $150. An employee 65 on January 1, 1940, if he has met the minimum requirements of six quarters of coverage, will receive the basic benefit of $30.90 a month. If he has a wife over 65, his benefit will be $46.35. In considering the effect upon a private plan, it is advisable to consider only the benefit which the single person at 65 will receive because provision must be made for him. If the worker is now 60 years old and his salary averages $150 to retirement age five years from now, he will receive $32.40. If he is now 50 years old and his salary continues at the same rate to age 65, he will be entitled to $35.40.

If these benefits are expressed as percentage of average earnings, the $150-a-month worker who is now 65 will receive 20.6 per cent of his earnings; the worker who retires five years from now, 21.6 per cent; fifteen years from now, 23.6 per cent. The younger worker, for instance the man who is thirty and who averages $150 for the next 35 years, would receive an annuity of about 27 per cent, but his wages would probably increase during the period before retirement and the benefits would probably not be much over 20 per cent of his final wages.

If we assumed average earnings of $125 a month, the benefits would range from 23.7 per cent for the man now 65 to 26 per cent for the man now 50. In the lower income groups the percentage of benefits may be above 40 per cent. In the higher wage-earning groups the percentage will be below 20 per cent.

Since the great bulk of employees in public utilities probably range between $100 and $150 a month earnings, it is a pretty safe statement that the pensions provided under the Act will amount to between 20 and 30 per cent of the wages of the typical worker. If he is married and his wife is 65 or over, the pension would be higher. While these benefits are considered adequate for a social insurance system they will not solve the pension problem of the average utility or industrial concern. Experience has shown that to be effective a pension plan should provide not less than 40 per cent of the final pay and preferably a higher percentage for those in the lower income group. If a company depends entirely upon the Social Security Act some workers will be retired but there will be a tendency to keep many older workers too long. The Social Security benefits would more nearly meet the pension problem of a company with a large proportion of its workers in the lower wage groups, but I doubt if many utility companies will fall into this category.

It would therefore seem necessary to supplement the Federal plan with a private plan to provide more adequate pensions to the factory or utility worker.

Since the benefits under the Social Security Act are not computed on wages in excess of $3,000, the percentage of benefits to earnings is much lower for the salaried workers. For the $3,000 man the benefits will be around 17 to 18 per cent. In the higher salary group the percentage is much lower. For the salary group the Social Security Act is therefore of little assistance and it would thus be necessary, in any event, for a company to have a plan for this group. It has been found in practice that a pension plan is even more necessary for the salaried workers, including the highest executives, for the simple reason that the success of a company depends upon the decisions made by those in executive or key positions.

Once it is decided to adopt a private pension plan to supplement the Social Security plan, the question arises as to the best type of plan. Prior to 1925 there were very few soundly financed pension plans in this country and because of the increasing cost to companies which kept their plans on a current-cost basis, it was becoming increasingly evident that pension plans should be put on an actuarially sound basis. The insurance companies then came into the field and offered group annuity contracts. Since 1930 the great majority of plans adopted have been insured plans.

There are two general types of plans: (1) the matched dollar or money-purchase plan and (2) the fixed benefit plan. Under the money-purchase plan the employee contributes a fixed amount of his salary and the employer matches this contribution. The benefits for each employee would be determined by what his contribution would buy at his particular age. Under the other plan, the benefits are fixed at a definite rate, generally in terms of per cent of salary for each year of service. The employee's contribution is also fixed and the employer pays the balance. The great majority of group annuity plans are on the fixed benefit basis.

The arguments advanced for the money-purchase plan are that the employer and employee should contribute equally, and if the younger employee's dollar will buy more than the older employee's, he should be given benefits accordingly. It is also claimed that the employer will know exactly what his cost will be.

The objection which has been raised to this plan is that a much larger part of the employer's money would be used for the purchase of annuities for the younger employees who are many years away from retirement, and not enough for the older employees. The employer is naturally concerned now with the employees who are approaching retirement age and under this plan the benefits to the older worker would be quite small, in fact too small to provide an adequate pension. For instance, the employer's contribution for the employee 20 years old would provide almost five times as much annuity as for the man 60 and it would thus be necessary for the employer to make a very large provision for the past service of the older employees.

The benefits provided for each dollar of contribution rapidly diminish in the higher ages and each year the employee's contribution buys less. If salary increases occur during the latter years, the amount of benefits will be lower in proportion to the final salary.

Under most plans the employee who leaves does not receive credit for the employer's contributions unless he has served a stated number of years—five, ten or fifteen. Turnover among the younger employees is generally much higher than among older employees. If the employer has put money up on these employees and receives refunds when they leave, the money has been unnecessarily tied up. If the plan were a liberal one and the employee of only short service would take with him a paid-up an-

nuity based on the employer's contribution, it would involve large additional cost to the employer and it would work to the detriment of the employee who stayed through to retirement.

A fixed benefit plan would seem to more adequately meet the requirements of the typical company. Such a plan provides a definite annuity, say, of one or 2 per cent of salary for each year of service and the worker can easily estimate the annuity he will receive. The same rates apply to everyone. It is true that very little of the employer's contribution will go to purchase annuities for the employee who is under 30 or 35, but if the younger employee stays on to retirement, the employer will contribute at least as much as the employee has contributed. The employee's contribution, in the middle ages, will buy approximately the same as the employer's contribution. For the older employees, the employer's contribution will be higher than the employee's, and in the upper ages, much higher. The plan will thus provide more adequate benefits to the worker who will be retired within the next twenty years. Hence the plan takes care of the older worker, about whom the employer is particularly concerned. The younger employee will always get full benefit for his own contribution and if he stays long enough to receive a paid-up annuity for the employer's contribution, or if he stays through to retirement, he will receive benefits much more than his own contribution would buy.

Since the Social Security Act was passed, fixed benefit plans quite often provide that employees under 35 are not included, and thus the chief objection raised to this plan no longer holds.

The prime purpose of a pension plan is to enable the employer to retire a worker after he has passed his period of usefulness. If the plan does not provide adequate pensions at the start or during the early years, it will not serve this purpose. To provide adequate pensions the cost in the long run would be about the same under either method.

The question will also arise as to whether the plan should be underwritten by an insurance company, or whether the funds could not be handled by the company itself or turned over to a trustee. The fact that the great majority of plans adopted by large companies during the past ten years have been underwritten by insurance companies would indicate that employers generally feel that to safeguard the plan and protect the employees it is necessary to have the funds segregated from their business and handled by those who are expert in this field. The insurance companies can be of considerable assistance in drafting the plan and adjusting it from time to time. If the company were very large, with large funds invested, a satisfactory arrangement could be worked out with a bank or trust company and a consulting actuary.

Several different plans are now being offered by the insurance companies to fit into the Federal Old Age Benefit Plan. If a money-purchase plan should be determined upon, a typical plan is one in which the employee and employer would each contribute two per cent of the first $3,000 of earnings and five per cent of earnings over $3,000. Such contributions would provide adequate pensions for those in the younger ages but would not be adequate for those who are retiring within the next fifteen or twenty years, and substantial additional payments by the employer would be necessary during the early years if adequate pensions are to be provided for these older workers.

Before the Social Security Act was passed, a typical fixed benefit plan provided for retirement at age 65 (generally at age 60 for women), with a benefit of two per cent of salary for each year of service in the future and a past service credit of one per cent of salary; or, if the company could afford it, 1½ per cent for past service. Such a plan has been found to provide fairly adequate benefits.

To obtain similar benefits in conjunction with the Federal Old Age Insurance Plan, a plan which provided benefits of one per cent of salary up to $3,000 and two per cent of salary over $3,000, with a starting age of 35, would be adequate. Thus a man earning under $3,000 who had been with the company since age 35 would receive 30 per cent of average pay. (This, however, would probably be between 20 and 25 per cent of final pay.) This together with the benefit he would receive under the Federal plan would probably produce an annuity of between 40 and 50 per cent.

Commencing the plan at age 35 eliminates the difficulty in having a number of younger persons come in and out of the plan. This younger group, particularly girls, is naturally not so interested in contributing toward a pension plan. Such a plan also meets most of the objections raised against this plan by those who favor the money-purchase plan.

A second plan which might be used would be to have no benefits accrue under the private plan for the first $600 of earnings. The Federal plan, in effect, provides 40 per cent of the first $600 of salary and ten per cent between $600 and $3,000. Thus the private plan might start at $600 and provide a benefit of 1½ per cent or two per cent on all pay above $600, or it might provide 1½ per cent on the pay between $600 and $3,000 and two per cent on pay in excess of $3,000. Average results about the same as under the first plan could be obtained. If the funds of the company were not adequate for a complete plan, the plan could be limited to those earning, say, $1,800 or $2,400 and over.

After the decision has been made as to the benefits for future service, the problem must be faced of providing benefits for past service and financing the cost of this accrued liability. If no credit is given for past service, the pension for employees retiring in the early years of the plan would be very small and for a long time the plan would not accomplish its purpose. This would not be serious if the company were young, but for a long-established company some credit should be given for past service.

Fortunately, the Federal plan will greatly assist the company in meeting this accrued liability. In the case of the $150-a-month-man, the Government plan finances the first $32.40 of monthly pension for the man who retires next year and an increasing amount for the man who retires in each of the following years.

A frequent practice before the Social Security Act was to provide a credit of one per cent of the salary at the start of the plan for each year of prior service. As wages had increased considerably prior to 1930 this generally meant 1½ per cent of average pay. With the benefits accruing under the Social Security Act, credit could now be given at one per cent and only for service from age 35, instead of for all service. Or the plan might provide one per cent of the first $3,000 and 1½ per cent over $3,000. It is not necessary to pay the accrued liability in one sum and it may be spread over a period of ten to twenty years.

Assuming a company adopts a plan as of January 1, 1940, which would provide a past service benefit of 1 per cent of the salary on January 1, 1940, for each year of service from age 35, and a future benefit of one per cent of pay for wages under $3,000 and two per cent for earnings over $3,000, a $150-a-month man would receive the following benefits:

If he is 65 and has been with the company for at least thirty years, the benefits under the company plan would be $45 (30 x 1 per cent x $150); under the Federal plan, $32.40; or a combined pension of $77.40, or 51.6 per cent of his pay. The man who is now 55 and came to the company prior to age 35, will also receive 30 per cent under the company plan, assuming his salary remains stationary until retirement — 20 per cent for past service and 10 per cent for future service. He will thus end up with an annuity of $45, which together with his pension under the Social Security Act would amount to $78.90 or 52.6 per cent of his salary.

Almost everyone agrees now that it is sound industrial relations to finance the current cost of an annuity plan on a contributory basis, with the employee and employer sharing the cost equally. The employees are generally divided into wage classes and the monthly contributions for all employees in each class are the same amount. A plan providing benefits in the amount just indicated would involve contributions of about two per cent for those under $3,000 and 4.5 per cent for those over $3,000.

The cost of a plan to the employer depends on a number of factors — not only the benefit formula and other provisions but also upon the relative number of men and women and the distribution as to age groups.

An adequate plan providing for both past service and future service credits will probably cost the employer at least five per cent of the payroll, on the assumption that the past service cost would be spread over a 20-year period. This would be in addition to the Social Security taxes.

As stated at the outset, however, this cost of an adequate pension plan should not be considered as an additional expense. If no formal plan is adopted, some sort of a plan will eventually be followed and once the practice is commenced of retiring employees on pensions without a provision for financing, the cost in the future is apt to become prohibitive. If no plan is adopted and the workers are kept on after they have passed their period of usefulness, the cost is merely buried among other items.

There are a number of other provisions which must be carefully considered in the formulation of a retirement annuity plan, such as service qualification, the withdrawal and death benefits, options for dependent's annuity, etc. Variations in these provisions also affect the cost.

No attempt has been made to indicate what adjustments should be made in company plans already in force to coordinate them with the Social Security Act. The exact adjustment would depend upon the details of the plan and very few plans are alike. In making the adjustment the same principle can be followed, however, as indicated above for new plans. It might be necessary to make a distinction between the benefits for employees who are already on the force and employees who are to be added in the future. The plan which in the past has provided a future service credit at two per cent could be changed to provide a credit of one per cent for each year of service on salaries below $3,000 and two per cent above $3,000. It might further be provided that credits would accrue only after age 35. Adjustments which have generally been made in the plans provide that the combined benefits to the employee will be at least equal to those which he would previously have obtained under the company plan.

If a company has no formal pension plan and is now interested in adopting such a plan, or if a company with a plan desires to adjust it to the Social Security Act, the best procedure would be to get in touch with an annuity consultant or with one or more insurance companies offering group annuities. Analysis can be made of the payroll and fairly accurate estimates can be given of the cost of the different plans and the effects which variations in the different factors will have upon the cost. The consultant or insurance company can also be helpful in advising as to the method of financing the cost. There is now a wide background of experience in company pension plans and it would be wise to benefit from this experience in drafting the detailed provisions of a retirement annuity plan.

Accountants Need a Sense of Humor

(*Continued from page 516*)

present taxes—we conceive that the government relief measures are financed largely through bond issues. Many taxes are for general rather than for specific purposes. I am not in any way questioning the right of the government to tax, or even the wisdom of the taxes actually enforced. I simply want to suggest to you that stock-promoters have given a misleading picture of just what a corporation is and how it works. The promoters have allowed public utilities to be presented as public nuisances instead of public benefactors.

I should really prefer that in your minds you wipe out anything that smacks of destructive criticism in this talk. If I have at times used a negative rather than a positive method of presentation, this has been done with the idea of fastening your attention on real opportunities in the future than lost opportunities in the past.

I will not say that accountants are not aggressive; no one who has had much experience with them will be willing to concede that. What I hope is that your aggressive spirit will demand an outlet for your imagination and that through cross-analysis of your accounts you will force your directors into seeing and presenting to the public an x-ray picture that will settle once for all the agitation to destroy private initiative and to regiment life in our fair country.

Philadelphia Electric Co. Wins Cup for Promotion of World's Fair Utilities Exhibits

THE Philadelphia Electric Company won first prize, a silver cup in the special contest conducted by the Public Utilities Advertising Association for the best planned and executed promotional program publicizing the electric utilities exhibits at the New York World's Fair, E. K. Hartzell, of Bristol, Tennessee, President of the Association has announced. Miss Clara H. Zillessen is advertising Manager of the Philadelphia Electric Company.

This was the twenty-eighth prize which Philadelphia Electric advertising and displays have won in 1938 and 1939. This World's Fair contest was conducted in conjunction with the Public Utilities Advertising Association's annual Better Copy Contest.

Unbalanced Objectives in Financial Accounting

By Roy B. Kester
Professor of Accounting, Columbia University

An address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 14, 1939

At the 1939 annual meeting of the Controllers Institute of America, Mr. Jerome N. Frank, Chairman of the Securities and Exchange Commission, spoke on the topic "Accounting for Investors—Fundamental Importance of Earning Power." In this talk he gave a very able discussion of the various functions of accounting, the parties to be served by it, its "inexact exactness," and he laid particular emphasis on its service to the investor, saying that he did so purposely because it is characteristic of one to see things through the eyes of one's own interest in them. In this connection, one is reminded of the old story of the elephant and the six blind men, none of whom had ever seen an elephant. One blind man approaching the elephant felt only his legs and concluded that the elephant was very much like the trunks of trees; the second one felt only the expanse and flatness of his sides, and to him the elephant was like a wall or the side of a house; the third felt his trunk and noting its round slenderness and the opening at its end concluded that the elephant must be like a hose; the fourth felt his tusks and said the elephant is like a poniard or spear; the fifth, who had limited his examination to the tail, was sure that his physical sense of touch gave him the impression of a rope or large cord; and the sixth, who felt only his ears, concluded the elephant was much like a fan. They thereupon fell to quarrelling as to what the elephant was really like.

Periodically the accounting elephant has been the subject of examination as to its real nature and objectives—fortunately not by six blind men, but unfortunately, in some instances, by those with blind spots interested only in its adequacy or inadequacy in serving their own interests. While there are usually some features of these periodic examinations or inquisitions which are distasteful to the profession and even temporarily harmful, from a long point of view they have been helpful and from them has always come a better practice of the profession than was so before. Any social science which must adapt itself to the changing needs of the times must be subject to these periods of external criticism and internal analysis, if it is to retain its basic characteristic as a service tool or agency of social institutions, both private and public. There are, however, dangers inherent in these periodic examinations, in that, due to the particular interest which has been their occasion, undue emphasis on a particular function may easily develop unbalanced objectives. It is to the prevention of this danger that this paper addresses itself.

It is not until the Industrial Revolution that the beginnings of present-day accounting, with its many complexities and refinements, become apparent. Just as the larger introduction of machines in armies today has changed military techniques, so with the introduction of machines in business, the techniques of business and accounting have undergone rather radical changes. Changes in the legal form of organizations have also been responsible for changes in business and accounting techniques. In the small business operated by a single proprietor in close personal touch with all of the phases of operation, complexities of accounting are not numerous, for, in the main, they are directed to serving the needs of a single owner-manager. Much of the same situation is found in connection with the partnership form of organization, as in most instances all of the partners are actively engaged in the management of the business and thus have means of knowing all about the business. Likewise, the same conditions prevail in the small closely-held corporation where the owners are also managers. The beginnings of change, however, are noted here in that due to the limited liability of the owner, the prospective creditor has a right to demand a rather intimate knowledge of some phases of the condition of businesses applying for credit.

In all of the forms of business organization discussed above, the sources of proprietary capital are largely the private funds of the managers. When, however, it became necessary for business managers to seek capital funds from outsiders who could not be given intimate participation in the management of the business, an entirely new set of circumstances came into being which demanded rather different accounting treatment. Similarly with these large accretions of proprietary capital funds, there came into existence a new type of borrowing in the form of bond issues or long-term notes. Society through the State has from the beginning had an interest in private business, inasmuch as a large part of the revenues of the State are secured by levying on privately owned properties of various kinds. As the business economy has become more complex, society has found it desirable to establish certain protective agencies for the individual, for small enterprises, and for the State itself. It is apparent, therefore, that at the present time there are several parties who are interested in the economic activities of society and increasing demands are being made on accounting to serve as well as may be the interests of these several parties. These several groups are: 1. Management; 2. Short-term creditors; 3. Long-term creditors; 4. Long-term owners; 5. Short-term owners; 6. Society—both state and individual. It may be appropriate to discuss briefly the services of accounting to these several interests.

The fundamental objective of management is two-fold and may be stated briefly as: 1. The maintenance of the integrity of the capital entrusted to its care, and 2. The earning of an adequate return on such capital. With regard to maintenance of the integrity of the owners' investment, it is interesting to raise the question as to what constitutes that capital. Is it the money invested by owners, or is it the physical plant facilities which that money bought at the organization of the corporation? This is important when one takes into account the changing purchasing power of money. Inasmuch as the unit of measure, namely the dollar, changes in value over the years like any other commodity, it very frequently happens that the maintenance of capital in the form of an equal number of dollars does not in any sense se-

cure the maintenance of the physical plant units in which the original capital was invested, for these units wear out and must be replaced. With the changing purchasing power of money, replacement often requires a larger or lesser investment of capital than the cost of the plant units replaced. The integrity of the originally invested capital is not preserved by maintaining an equal number of dollars of investment. With regard to the securing of an adequate return on investment, it should be pointed out that standards of adequacy change considerably over the years. What is looked upon as an adequate return during a period of depression may be considered wholly inadequate in a period of prosperity, and what is a satisfactory return in a country that has reached its maturity economically may be wholly inadequate in a young, rapidly developing country.

For the information which it needs relative to the operation of its business, management relies very largely on accounting. What is taking place within the enterprise it is the function of accounting to record, verify, and summarize in the form of suitable reports to the various executives. In recent years the method of the formal or informal budget has been quite generally adopted as the standard with which to measure the results attained. Such a procedure secures for management, by means of the continuous analysis necessary to account for deviations from the budget, a rather close control over operating activities. It is thus apparent that management uses accounting as a device for controlling the day-to-day operation of business. Service to management has been and always will be the main objective of accounting.

With regard to the interests of creditors in a business, certain information must be furnished to the short-term creditor and other information to the long-term creditor. The commercial bank, when making a short-term loan to a business, is interested mainly in assuring itself that the borrowed funds will be repaid when due. Similarly, when a vendor sells merchandise on credit to a business, he tries to assure himself that the merchandise will be paid for in accordance with the terms of the contract. Such short-term creditors are, therefore, interested chiefly in securing information concerning the debt-paying ability of the business at a given time. The position of the business as to amounts invested in plant and other fixed assets and even the earning power of the enterprise are of secondary interest. No such short-term creditor would lend funds if he felt that it would be necessary through court action to levy on the assets of the business for repayment of the loan.

The long-term creditor, on the other hand, must have information as to the security of his money and the probable ability of the enterprise over the years ahead to pay the agreed interest for the use of his funds. Accordingly, since he is lending dollars of current purchasing power, he desires to know the present value of the collateral security for his loan. He must judge whether there is a suitable margin of safety between its value and the money asked for. Not only this, but he is interested in the probable service life of such security, particularly when it is comprised of items of plant or plant equipment subject to depreciation. He may find it desirable to insist that, in order more surely to protect the money which he has lent, the corporation build up a sinking fund with which to pay back at maturity the sum borrowed. Because the contract is a long-term one, he is particularly interested in the earning power of the business and wants information as to the probable excess of earning power over the need for interest on borrowed funds in order that he may judge the ability of the business to keep itself in sound financial condition.

With regard to owners' interests in the business and how they may be served by accounting, here also cognizance must be taken of two kinds of owners, viz., those who place their funds in the business for a comparatively long period of time and those who invest on a short-term basis, that is, speculators who buy stock only when they think its price is low, with the thought of selling out when market appreciation takes place. Both classes of owners must base their action on certain types of information, some of which may well flow from accounting records while others must come from sources outside the business.

The long-term owner is interested in the security of his funds, adequacy of return, and the maintenance of a sound financial position at all times. He knows that every business goes through periods of prosperity and depression, that technological change requires on the part of management constant foresight and suitable policies to meet it. While he may be interested somewhat in the market's appraisal of his investment, the investment was not made for the purpose of an early realization of such market's appraisal. Security, earnings over the years, and a sound financial condition are, as stated above, the things in which he is mainly interested. Accounts as usually kept serve well the needs of the long-term investor.

On the other hand, the stock speculator, "the in- and out-er," is interested primarily in the market's appraisal of the value of his holdings. Knowledge as to past and present earnings as reflecting the trend of future earnings is his chief concern. Earnings for the present fiscal period and those just ahead have a large place in the formulation of his judgment as to the desirability of buying or selling an equity in a business. The current position of the business cycle, the relation of his particular enterprise to the industry as a whole, the intelligence of its management, any special relationships to society, and similar considerations are pertinent to his interest. Thus, it is seen that much of the information the short-term investor needs it is not the function of accounting to supply.

Society, usually through governmental agencies, is the sixth party interested in private business. This interest springs from the need of raising revenues to carry on those general activities which society in every civilized community finds desirable; from the position of the individual as a consumer of the products of private industry; and also from the position of business as an employer of the services of individual members of society. In those industries where the forces of competition are active, the consumers' interests are usually fairly well taken care of through the interplay of the forces of demand and supply. In those where freedom of competition has been stifled, or where it has been decreed that the maintenance of competition results in waste, society has attempted to protect itself by suitable restrictive legislation. This is seen in the case of our public utilities, through the exercise of control over the rates to be charged and through those other elements of control deemed necessary in connection therewith. In the case of other privately owned businesses, restrictive legislation may take the form of such things as fair trade laws, truth in advertising, inspection of product to assure suitable quality, the imposition of tax burdens on some types of business organization and not on others, as is the case with chain stores in many of our states. Society has also pretty generally taken over control of many features of the physical

welfare of the worker. Legislation concerning sanitation and health, responsibility for injury and vocational disease, minimum wages and hours of employment, social security and unemployment taxation, and similar regulations are examples of such control.

Conflicts in Interest

It is easy to see how conflicts of interest among these six parties may arise because of the various kinds of information needed. Management's duties and responsibilities cannot be disassociated from the type of enterprise being carried on. Thus in those enterprises where owners and management are one and the same, management does not ordinarily need to concern itself with its duties to the owners of the business. However, increasingly business has gone to the public for capital funds to be entrusted to its management. Management has been slow to recognize its full duty to such owners. Accounts as kept for the purpose of management usually have a long-term point of view, and are not easily conformable to the short-term viewpoint, in this connection aiming only in a substantially correct and accurate showing of results which are subject to subsequent verification and more exact measurement. An accurate record of all costs incurred; a measurement of outlays by the results achieved thereby; a record of payments made to owners by way of profit distributions; a setting aside of suitable reserves, either out of capital or out of earnings, to care for unforeseen contingencies; a reflection of the long and short-term financial position of the business, and a record of the various classes of ownership—these constitute the chief kinds of accounting information required by management. The policies and activities of management as reflected in the accounts, of course, are subject to periodical review by owners. As referred to above, management also makes use of accounts in providing it with the necessary controls in the operation of its business.

A few illustrations will now be given of the conflicts, which may so easily arise among these several parties at interest, in connection with the types of information to be furnished by the accounting records. Prudent management, largely for the purpose of reflecting the short-term credit position, has generally measured inventory values on the basis of the lower of cost or replacement cost. In some instances management has felt that a valuation based on sales price serves better its purposes. Again it has sometimes felt that valuation by means of the normal stock method is sound in particular industries. In others, what is known as the "last-in, first-out" cost method, rather than the "first-in, first-out" method has proven desirable.

Depreciation has sometimes followed the replacement reserve method, in others the straight-line method, in others the reducing balance method, and in still others the unit of output or service rendered method. Management's interest in depreciation is largely that of reflecting the cost of consumed plant equitably in the cost of products turned out by that plant. The long-term creditor, who is looking to plant property as the security for his loan, may well be interested chiefly in the determination of depreciation by means of a physical appraisal. In this regard, he is interested in the changing price levels of his collateral security. He may not, therefore, consider improper the writing up or writing down of such plant property to accord with current price levels. For the most part, management should be little interested in that kind of information.

The earlier-than-planned termination of the life of an asset or of a liability may be viewed from different standpoints by the various parties at interest in a business. Machinery which becomes obsolete and has to be scrapped before the planned termination of its useful life is best charged off against surplus, in accordance with management's view. Similarly the unamortized debt discount and expense of a bond issue which is redeemed before maturity may well be charged off against surplus. If, however, a bond issue is refunded to gain the benefit of a lower interest rate offered by the market, there is not, by any means, uniformity of opinion on the part of the various interests as to the proper handling of such unamortized debt discount and expense of the old issue or the redemption premium which often has to be paid.

Investment securities, purchased for the purpose of securing control or trade advantage of another company, from the standpoint of management may well be retained in the accounts at the price paid for them, even though the market's appraisal of such securities has changed rather markedly since the time of purchase; although it is recognized that there are situations in which cognizance should be taken of such price changes. In some instances management feels it desirable to reflect in the value of such investments the earnings made and losses sustained since the date of their acquisition. The method of the consolidated balance sheet is often used to reflect changes in the book value of such investments. The short-term owner may be interested chiefly in the current market value of such securities.

There may easily be conflict of interest between society and any one or more of the other interested parties. From an accounting standpoint, there may even be conflict among several of the social groups interested. Thus in connection with income taxation—which is based largely on accounting records—it is interesting to note what happens when such government agencies undertake to regulate for their specific purposes the way in which the accounts are to be kept. It has usually been looked upon as sound business and accounting practice to accumulate all of the costs of purchase or construction of fixed plant in accordance with the conditions of such purchase or construction. It is appropriate, therefore, to capitalize interest and taxes paid during the process of construction or purchase of plant units or properties. Government agencies such as the Interstate Commerce Commission and the Power Commission recognize this as sound practice. Not so, however, the Treasury Department in connection with income taxation. Here such taxes must be deducted from income in the period in which they are paid, which means that they must be recognized as revenue expenditures and not capitalized. Similar conflict relates to the amortization of the intangible assets, goodwill and organization expenses. Prudent business management requires that these items be amortized by charges against income or surplus, whereas such amortization is not allowed in connection with the statement of income for purposes of federal taxation. Many other inconsistencies and conflicting viewpoints arising out of self-centered interests could be pointed out.

Limitations of Accounting

It cannot be too strongly emphasized that these several parties at interest in business should not expect the accounting reports to furnish all of the information needed by them in their relations to the business. Not only is the furnishing of some of this information not an objective of the accounting records, but accounting itself as a collection device is not equipped to furnish some types of information. Certain of these types not furnished by the accounts have been commented on above. Furthermore,

within the field which accounting is equipped to serve some limitations as to its accuracy should always be recognized.

Accounting is, essentially, a measurement device. It makes its records in terms of money as the measurement unit. Because of that fact its reports, mathematically provable within the system of double entry bookkeeping, therefore, take on a greater degree of accuracy and exactness than the source of the information measured warrants. So many of its measurements rest on human judgment rather than on an invariable yardstick. Such items as the value of inventories, the depreciation of fixed properties, the allowance for uncollectible accounts, the valuation of many investments and securities whose value is not determinable in public stock markets, the accrual items, such as pension and tax accruals, the amortization of intangibles both among the assets and the liabilities—all these are illustrations of the necessary inexactnesses of accounting judgments which, though reflected in figure amounts, cannot be more exact than the sources from which they have come.

Furthermore, accounting does not have a strictly scientific terminology, as do some of the physical sciences. It uses words and phrases, which are also the language of the non-technical. It is extremely difficult, therefore, for accounting to place upon much of its terminology those niceties of meaning which characterize the technical terminologies of the physical sciences.

Moreover, the use of the short fiscal period is apt to introduce further elements of uncertainty and inexactness in accounting reports. Many human judgments are not subject to verification within a period as short as one year. The accuracy of judgments with regard to yearly depreciation estimates, for example, are not subject to certain proof until the depreciable asset has come to the end of its service life. If that life is ten years, then not until the end of ten years may we know *certainly* the amount to be charged against revenue during the ten-year period.

Similarly, in connection with the accuracy of the measurement of inventories, while the over- or under-statement of an inventory in one period will render inaccurate the operating results of that period, yet at any time in the future when the inventory is correctly stated the inaccuracies of previous periods are, from the standpoint of the longer term covered by these inaccuracies, corrected. All of the finer distinctions which are characteristic of modern accounting practice rest largely on the demand that results for short fiscal periods be shown. Such concepts as accrued and prepaid expenses, accrued and unearned income, and the distinctions between capital and revenue charges have their origin in the showing of results for short fiscal periods.

Some Conclusions

It is increasingly difficult, therefore, for the accounting records to serve equally well these various interested parties. It may well be said that there is no such thing as a satisfactory all-purpose balance sheet or income account, nor, under ordinary circumstances, is it possible to draft separate accounting statements to serve each of these interested parties. Rather, it seems to me, there should be recognition on the part of all who may find it desirable to use accounting statements that they are not equally well adapted to these several uses. Those who use accounting statements should have in mind the limitations necessarily involved in such statements. Only those who know how they are drafted, the sources of the information which goes into them, and the possibilities of inaccuracies are in any position to use such statements intelligently. Inasmuch as there has been built up a large expectancy on the part of the untrained that these statements seem to mean much more than they really do, it is, therefore, incumbent upon the accounting profession to enter upon a campaign of education as to the real meaning and, therefore, the limitations of such statements.

The way in which records are kept, the manner of handling various types of transactions—some of which have been commented on above—and the various interests to be served, are such that entire uniformity should not be expected in the treatment of similar items under varying sets of circumstances. What should, however, be insisted upon is that, throughout the records of a given business from year to year, transactions of the same kinds, under similar sets of circumstances, should be treated with entire consistency so that the results of different periods will be on a truly comparable basis.

Business is necessarily largely individualized; the accounting records reflect historically the policies of management in administering the affairs of a given enterprise. This is the main function of records and it should never be lost sight of, either by those who use the records or by those who make them. Accordingly, the transactions of a business must be recorded in conformity with the policies of management as reflected therein. To do otherwise would result in a falsification of the record. Since the circumstances surrounding a given transaction, viewed in accordance with the policies of the business, will largely determine the manner of its record, it is the duty of the accountant to make a full and fair disclosure of the controlling circumstances in all those instances where such record may seem not to conform with well-recognized practice. Such disclosure may well include a statement of the different effects of the record as made from those which would have resulted had established practice been followed.

Attention was called above to the increasing complexities of business operation and the delayed recognition by business men and accountants of their full responsibilities in connection therewith. An intelligent management will constantly keep in view its duties to the several parties at interest in a business, will keep its records and make its reports adequately to serve these several interests; for only by so doing can it serve adequately its own requirements. This, of course demands a high standard of ethics in dealing with these interests and a recognition of the full scope of management's duties in this connection. Such recognition will bring about a nice balancing of the requirements of these several interests and will result in a proper accounting record of the activities of a given business.

Unbalanced objectives, resulting in an overemphasis in the record of the requirements of any of these interests, will destroy the proper perspective and effectiveness of records and must always be opposed with all possible vigor and resolution.

The chief objective of the accounting record as previously emphasized is to serve management in its two-fold purpose of maintaining the integrity of capital and of securing an adequate profit. Unless this is accomplished, the interests of the other parties are endangered. To permit these other parties, governmental agencies or other pressure groups, to turn the accounting records away from their chief objectives in order more fully to serve their own self interests is to permit a wholly unwarranted and dangerous interference with the management of business.

Realistic Accounts and Statements —For Management—For Labor

By J. E. McCarthy
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An address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 15, 1939

A FEW months ago I was called to assist the president of a traction company. The traction utility has for too many years been harassed by ever-recurring labor strikes and on the instance of my being summoned, was again on the threshold of a strike. The principal issue at stake resolved itself about the company's ability to pay an increased wage to the workmen.

Obviously, the first thing I wanted to know was whether this company was making sufficient money to pay an increased wage. In tones saturated with self-pity, I was informed that the employer under no circumstances could afford to meet the workers' wage demands. As proof of this statement I was handed a solemn looking tome titled "Report of the Company to the Public Service Commission." I gathered that from the report to the Public Service Commission I would find all the evidence necessary to substantiate the management's contention of poverty.

I took the report home for study and of all the indigestible lumps of accounting phenomena that I have ever encountered, this was the most amazing piece of unrelated fantasy that I had ever been exposed to.

The maze of schedules, exhibits, supporting data and other legalistic requirements of the Public Service Commission were present in all of their malodorous glory, but nowhere was there a simple, clear, concise, condensed statement of what the company owned and what it owed. The operating statement was likewise a tortuous document with a complete isolation from the age-old adage that "all good things are simple."

I had no criticism to assess towards the company accountants who are required to make up this type of report, but, I did feel that in service to the employer and one's self, a better presentation of the operator's position might have been prepared.

I wish that I could report to you that I reduced the traction company's figures to comprehensible levels and through the apt and brilliant employment of these simplified statements I contributed something to the company's presentation of facts to the board of arbitration, thus enabling them to gain a victory in resisting the wage demands. The first part was accomplished well enough, but with the pendulum swinging to extremes in our current labor disputes, an award favoring the workers was brought in. The award was an emotional and not a factual finding.

The frequency of quarrels between my client and his workers suggested to me the thought that the management of the traction company was either incapable or unwilling to discuss the intimacies of their business with their employees. And because of this policy of reluctance to make a reporting to labor, the workers had a thoroughly erroneous impression of management policy. The workers believed that management was deriving a continuing and more than reasonable profit from operations when, as a matter of fact, the company was losing money. Not one dollar of bond interest had been paid since 1931, and the common equity owners had not received a payment since 1928.

Neither did the workers know that $20,000 of investors' money was necessary to create one job with this particular utility. It had never been suggested to the workers that some degree of hardship was being imposed upon the bond owners and the shareholders through management's inability to pay an adequate return to the owners of the tools. The workers were never reminded that they were using tools, belonging to others, rent free. Where a family takes occupancy of a house, the head of the family and all of its sane members understand clearly that rent, for use and occupancy is due periodically, and it is just as appropriate that the workman should recognize that he has a "rent for tools" obligation to those investors whose resources made possible his job.

These same workers had never been told that 45 per cent of the gross operating revenue, or expressed another way, that 45 per cent of the money the company received from the sale of their service, was expended for wages and salaries.

They had never been told that 23 per cent of money received had been spent in the purchase of goods and services from others and charges for expenses such as insurance, advertising, heat, light and power.

They had never been told that because tools, machinery and rolling stock wear out and become obsolete, it was necessary to create an adequate depreciation fund totaling 3 per cent of the gross revenue. He was never told that the additions to this account were his guarantee of the continuance of his job.

They had never been told that approximately 11 per cent of the total income was paid out to federal, state, county and local government in various forms of tax assessments. Neither was he told that these assessments amounted to $241 per worker.

This experience and many more that I have experienced have combined to make me severely critical of our accounting fraternity and I propose being so bold as to take departure from the role of being a good guest so that I may say some things that I believe should be said.

I do not believe, as someone has said, that the accountant should be "perfectly conditioned to function as an intelligent robot in the service of capitalism." I do not believe the accountant should be a person of empty silences and faint protests. I do not believe the accountant is a mechanism for recording figures in orderly rows and columns.

I believe the accountant was created

from a more convincing pattern; that he was and is intended to be a person of hard humility and with an active imagination. I believe he should have the power of detachment and an authentic individualism. I believe the accountant should be a professional improver, and the interpreter of all business.

But because of too much humility; or because accountants have permitted habits to harden into ineffectual doctrines; or because it is an unpardonable sin for an accountant to be enthusiastic; or because accountants have become victims of their own vocabularies, their status at best is some sort of mild executive.

If my premise is right, i.e., the accountant should be the interpreter of business, then the accountant has the obligation and duty to supply management officers and through management officers to supply the workers with straight forward, simple accountings as to inner-workings of business. These accountings or disclosures as to the intimacies of business have a great deal of merit and in themselves are self-liquidating. If we are willing to discuss our policies openly and to present them in simple, everyday terms, it would be an indication that business is not quite the villain some psuedo-thinkers make it out to be.

I think it becomes obviously clear each day that American business has an obligation to tell its story—or someone else, and certainly not a trustworthy someone, will do it for them. In your own field of public utility, your industry has long had a questionable character from both workmen and public because of your reports that were replete with cautious nothings, or reports that were so replete with accountants, terms that one became lost in a jungle of incomprehensible accountants' phrases.

The Italian monk who gave the world double-entry bookkeeping gave us a system of recording business events, that is, in its essence, simple, for it has as its purpose the balanced recordings of income and outgo. But somewhere along the road, accountants have indulged in the reckless poetry of word invention and they are now hostages of their own vocabularies; and instead of being capable of interpreting the conduct of a business in a simple, sincere way, they ask the readers of their reports to wade a torrent of phrases quite beyond any but a professional's capacity to absorb.

Let me illustrate what I mean. Very few words have exact meanings, for words are among the most slippery and evasive perfections of civilization. But unfortunately our tools of communication with our fellow creatures are words. When the accountant prepares his reports, he assumes that the people for whom the reports are prepared know exactly what he means when he records the item "Accrued Liabilities not Due." But do they understand—how often do minds meet—how often do they completely miss each other?

Most people identify words with things, and most people indulge in the misuse of abstract words. Since we are not reformers and since it is not our business to ask people to take a mental jump beyond their capacities, we must clear away the word blockade and employ words that are exact, simple and that have an accurate meaning both to the accountant and his audience.

Suppose you were asked to define the following terms:

"Space"
"Length"
"Photo-electric cell"
"Metaphysics"
"Electron"
"Democracy"
"Environment"
"Submicroscopic"

I can assure you that you would have difficulty with each of these words and not a little resentment on being called upon to interpret words with which you have had but little or no contact—or experience.

But the accountant has dug himself a deep hole and there in that splendid isolation of the detached, there emerges the mournful and mystifying words that fall as so much nothing upon the ear of the listener.

"Book Value"
"Inventory work in progress"
"Treasury Stock"
"Subscribed Shares"
"Percentage book value of fixed assets of cost"
"Accrued Indirect Labor"
"Discount Amortized"
"Accrued Liabilities Not Due"
"Capital Surplus"
"Donated Surplus"
"Deferred Credits"

Professionally, phrases of this sort may be perfectly valid tools of the accounting profession, but they are as inappropriate in reports to management, labor and to an interested public as a problem in quantitative analysis.

Might I suggest that there some fine, vigorous, commonly understandable Anglo-Saxon words of one syllable that might make for a better meeting of minds. Such words as:

"Cash"
"Own"
"Owe"
"Tools"
"Rent"
"Set Aside"
"Paid Out"

It would be rather difficult for anyone to distort or to confuse the true meaning of such words.

The accountant's job, in fulfillment of his obligations, is to supply management with reports that will, first, serve as an accounting of the stewardship of management. That secondly, will give the owners of a business precise information as to the conduct of the business and all the details necessary to reflect the condition of the business. Third, and last, he must make a report to workers (and to the public in many instances) that will be sincerely simple and in the aggregate, thoroughly understandable.

The accountant's mind should forever have that fecundity of ideas that recognizes that there is a trinity of interests involved in all business. There should be immediate acceptance of the code of thinking that the interests of owners, management and the worker are inseparable; that one may not succeed at the expense of the other; that as our business is constituted today no group of owners and managerial officials are embarked upon a policy of exploiting workers. Our interests, our successes, our futures are irrevocably linked to each other, and this being the case we cannot permit arbitrary accounting symbols to bring a harvest of ugly cynicism, and all the attendant quarrels that stem from misunderstandings of what management is attempting to accomplish in business.

It seems to me that new vistas are opening up for the accountant to render a type of service not only for the business with which he is affiliated, but for our American economy as a whole in taking abrupt and dry-eyed departure from the sterile, frustrated report of the past and to give welcome hospitality to the opportunity to serve all of those components of business through reports of a simple and convincing pattern.

When the accountant-interpreter shall have attained a disposition to rationalizes personalize and simplify his reports for mangement and labor, and when after an appropriate period of penitence in a hair shirt, he, I feel sure, will not feel like Hamlet, who when asked by Polonius what he read replied, "Words, words, words."

The Relation of Accounting Statements and Reports to Security Issues

By William W. Werntz
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An address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 15, 1939

THE ingredients of a matured investment judgment are not always susceptible of exact determination. Indeed, the operative facts which cause an investor to sell or buy or hold are often extraneous to the business itself. Judgment or perhaps merely a guess as to the future of particular industries may often be far more of a motivating factor in reaching an investment decision than the conclusions drawn from an analysis of the record already made by that industry or by a particular company in that industry. Similarly, in choosing between two companies in the same industry the selective factors may often be not the comparative statistical performance, but rather a judgment or a guess as to such possibilities as a shift in industrial centers or the birth and death rate of effective competition. However important these intangibles may be, sound investment judgment cannot be reached from them alone. They must be grounded against a solid table of historical information, if satisfactory results are to be obtained. It is largely this factual foundation which is sought in the registration statement and prospectus required by the Securities Act.

Roughly speaking, the registration statement or prospectus when filed consists of financial statements and of narrative information about certain major topics which the statutes and the Commission have selected as most frequently significant. The information so given is documented by copies of the company's instruments of organization and important contracts. It would be a vain struggle to attempt to allocate importance between these types of information, for the significance and informative value of each is increased by the others.

Before proceeding further, I should like to call attention to the change that has taken place in the emphasis attached by investors to varying types of statements. As recently as fifteen years ago a very eminent accountant assigned to the balance sheet, a statement of financial position, the most important place among the many kinds of financial statements that confronted the man in business. Almost continuously since then there has been an increase in the significance attached by experienced investors to statements which reflect the rate and direction and nature of change. Without detracting from the informative value of the balance sheet there has come a realization that knowledge of the road and scenery between year ends is essential. This new emphasis is not limited to the income sheet but includes, I think, analyses of surplus and reserves on the one hand and of major asset groups on the other. There is evident also a heartening tendency in many fields to explore the utility, as a means of providing information to prospective investors, of such seldom seen statements as the analysis of cash receipts and disbursements or the application of funds statement, or an historical summary of profits and their disposition. Various statistical and analytical presentations have also appeared. These need neither discussion nor praise to evidence the points I have in mind, that new forms and adaptations are possible and that accountants are searching for them.

This trend, I think, emphasizes the importance of the particular problems that I wish to discuss.

Inevitably, in a discussion of financial statements for investors there arise the twin problems of accuracy and intelligibility. The first of these, accuracy, has in itself two meanings. Opinion and judgment play so large a part in the recording of transactions and the preparation of financial statements that absolute accuracy, in a mathematical sense, is impossible.

In order to report on the condition of a business at a given point of time, the past must be separated from the future, assets must be distinguished from expenses. Since in reality the past and the future are incapable of clear separation, the attempt to distinguish between expenditures which still promise benefits and those which do not is a matter of difficulty. The decisions that must be made involve a good deal of judgment, its cumulated effect being reflected in the surplus and reserve accounts.

Even more subject to error is the attempt to single out a small segment of the flow of business and reflect in statements the results of that period's operations apart from the whole. In such an effort the relative degree of the error is magnified by the brevity of the period. These difficulties lead some to the conclusion that the uncertainties of the balance sheet and income statement amounts are such as to render them meaningless. Although judgment and opinion do play a large part in the construction of financial statements, nevertheless I believe that within limits accuracy compatible with their purpose can be obtained. The development of recognized ways of thinking about financial and business events and of sound accounting principles to be followed reduces progressively not only the margin of error in recording transactions and reflecting conditions but also the possibility, which is just as dangerous, of misinterpretation by those who read the financial statements but who have not a first-hand knowledge of the business. Without implying any straightjacketing of progress or of thought, it seems to me that by this development the field of alternative and inconsistent methods can be and is being materially reduced. If in those instances where judgment must necessarily play an important role in the application of accepted principles, there is high fidelity to the interests of fair play, then I think relative if not absolute accuracy is obtainable. Nor does the narrowing of the field of uncertainty imply an inflexibility in thought that would prevent adaptation of statements to meet the needs of a particular business. This prin-

ciple of flexibility is already embodied in our forms under the Securities Act and Exchange Act in the language "The registrant may file financial statements and schedules in such form, order and using such generally accepted terminology as will best indicate their significance and character in the light of the instructions."

However well adapted to their purposes, accounting principles can be no more accurate than the facts to which they are applied. Unless the event-recording function of the accounting system produces reliable results and is immune to the introduction of fictitious and misdescribed transactions, summary statements and analyses can produce only illusory results. We have had a number of cases in which this very fault has appeared. In each of them the Commission has firmly taken the position that the reporting company itself is charged with the responsibility of producing an accurate account of itself. Duties so important as these cannot be left for their entire performance to an annual check-up by an outsider. Such a check-up may be considered an essential under present conditions, but it is not a substitute. Without doubt, the first essential to the presentation of satisfactory financial statements is an internal accounting system that produces adequate, reliable and informative records. Only if the modern publicly owned business has such records available can the second step, their interpretation and presentation in appropriately summarized statements of condition and of operations, be successfully completed. If the principles to be followed in those statements are selected and applied with due care and regard for the interests of those who are expected to rely upon them, the financial information necessary for the formation of an intelligent investment judgment will be at hand.

This raises the problem of how to present financial information to investors in an intelligible and useful fashion. The conscientious draftsman faces a dilemma. Too much detail will often conceal rather than reveal the significant information or lack of it. The fault of too little is patent. Moreover, prospective investors, even if institutional investors and experts be excluded, differ in the significance they attach to particular information. In the same way, businesses, individually, are not always so homogeneous as the usual groupings such as utilities, manufacturers and investment trusts imply. Administratively, as you know, we have selected the procedure of prescribing reasonably detailed breakdown, disclosure of the more important accounting policies, and limited collateral information. The niceties of color and emphasis, the tailoring to prevent misleading inferences or omissions—these are left to the draftsman. We have prescribed, so to speak, the ingredients but not their precise mixture.

The attitude of some issuers toward this problem is varied, occasionally it is amusing. Some feel that the quickest way is to include a complete, and apparently unedited, record of everything, and the statements become so clogged with minutiæ as to be ineffective. Others cast their statements in a matrix of technical and legal verbiage that transforms the obvious into a riddle. Others object strenuously to further particularization of our requirements but continue to adhere rigidly to the letter of the requirements, construe them narrowly, and interpret the absence of a specific requirement as a prohibition. Each of these approaches seems to me to deny the ability or the willingness to approach the problem of full and fair disclosure with the same methods and the same spirit employed in meeting other business problems.

But these are generalities. They characterize the atmosphere in which work is done rather than suggest or criticize solutions of particular problems. Even the large majority who conscientiously attempt to present comprehensive and dependable statements find the goal of intelligibility not easily obtained.

I use the term "intelligibility" to avoid the word "simplicity," for the latter is often so misapplied as to be synonymous with "inadequacy." The old ten-caption balance sheet and one-figure income statement may have been simple, but they were also, I think, obviously inadequate. The scope and variety of business that is commonly conducted by a single large company defies reduction to a handful of figures spread over a page or two. When to this are added the complexities springing from an interrelated family of companies, often themselves having outside creditors and stockholders, the impossibility of intelligible presentation in a page or two is obvious.

I am reminded of a conversation I recently had with the president of a very large enterprise. In discussing the complexities of the particular inter-company structure he was frank to admit that he could no longer recall why most of the companies had been created or what they now contributed to the organization.

Within a given company the strange manner in which securities are sometimes created, with ambiguous, conflicting and overlapping rights, makes simplicity and brevity illusive. The spectacle, for example of several issues of preferred stocks with perhaps an income bond or two is not unknown. Nor is the existence of a stock (I will not call it preferred) which has been sold for $40 and is entitled to $2 prior dividends per year, but which has a par value of $10 and a redemption value of $45. In contrast to these cases there are, of course, many businesses which in structure and operation are such that adequate financial information can be presented in short space.

But whether the business facts demand brief or extensive treatment, much can be done toward making the financial presentation both simple and intelligible. With your permission I should like to enumerate a number of the more promising areas.

As I mentioned above, much can be done in the way of making uniform the principles followed in the preparation of the statements. Accounting statements are intended to convey information. In this sense accounting is a language. Therefore, sufficient similarities must be obtained between the financial statements of comparable companies to enable the reader to make comparisons without first having in hand a separate dictionary and grammar book for each of the companies. Like a language, the utility of accounting increases as its principles and definitions become standardized.

Next, there is the use of language as clear and unambiguous as the art of the draftsman can make it. Most of you can probably recall footnotes and explanations that were paragons of ambiguity and confusion. I would like, however, to quote one to you: In explaining the basis of inventory valuation it was stated: "The fixed prices are those below which the corporation has not bought light native cowhides, upper leather and crude rubber since 1920, with the exception of the period from November, 1931, to April, 1933." Abstruse and obscure language is not, of course, employed only by accountants or in financial statements. You may recall an opinion by Harold Neff of the Commission's staff as to the description needed in a prospectus of the provisions of a trust indenture permitting the issuance of further securities.

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Utility Arithmetic and the Utility Accountant

Fundamentals in the Relation of Outgo to Income

By F. L. Griffith
Vice President, Peoples Gas Light & Coke Company

An address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 15, 1939

I SUSPECT that it is well, in laying out any program such as yours, that there be sandwiched in among the more substantial items others which give the listeners an opportunity to relax and prepare themselves to give refreshed attention to more weighty matters which follow. No more than a glance at your program was required to suggest that my time on it should represent such a moment of relaxation. Particularly did I feel that my part must be a rather humble one when I noted the names of the distinguished speakers who would precede and follow me on it.

Thus I may say in advance that no one need have any suspicion that my remarks are to deal with actuarial formulae, prescriptions for the computation of depreciation, present values, or any other such complex subject. I have understood that the "arithmetic" to which my subject refers was intended to mean the simple, every-day variety only, and should feel quite unable to discuss any other kind adequately.

In the next few minutes I shall undertake to set before you a certain point of view in respect to my subject matter in the soundness of which I sincerely and firmly believe. However, the statements I shall make are intended to represent only my views, and not those of any other person or group.

A good many years ago I used to listen on occasion to the sermons of a certain minister. It was his habit to read rather impressively a "text" selected as the basis, his listeners were given to understand, for the body of his remarks. He would examine the several words in the text from the standpoint of the various meanings which the dictionary would indicate for them, eliminating the possible interpretations not acceptable in the light of the context, and so arriving at a profoundly accurate interpretation of the text as a whole. Peculiarly, his listeners were seldom able to see even an approximate relationship between the text and the subject matter of the sermon. Far from criticising this procedure, I propose to follow it somewhat.

As regards my "text," I believe utility arithmetic, if it is good arithmetic, is the same as good arithmetic in any line of business. We can't use any given set of figures to get a different result in the utility business from that which the same figures would have produced if used in the same relationship elsewhere. If this is true, then the first appearance of the word utility in my text for today could be dispensed with.

The foot-note which appears in connection with the program title assigned to my remarks embarrasses me. It seems to imply on my part some unusual acquaintance with the nature of utility outgoes and incomes, or the relationships between them. Unfortunately, I have no such unusual acquaintances, but even more to the point, many of my listeners may be better able to speak on such bases than I. The only relationship that I feel is particularly fundamental, as between utility outgo and income is that in an ultimate and final analysis, profit, or net income of any given enterprise can be positively and unequivocally demonstrated only when its aggregate revenues have exceeded, not only the aggregate amount of charges that may have been made against revenue, but *all* expenditures theretofore made in the interests of the enterprise, and that, pending the winding up of the undertaking itself the accountant must use his arithmetic in such a way as to anticipate from date to date, so far as practical and common sense limits will permit, the state of affairs that will exist when that day of final accounting arrives.

One peculiarity of the arithmetic of every-day accounting work is that, in tremendously important aspects, the accountant must coordinate his arithmetical results with the tearing of sheets from the calendar. Thus a computation that will produce exactly correct results at *some* time does not necessarily produce accurate results *now*. Probably no one here will question the statement that every dollar spent in the acquisition or construction of what used to be called "fixed assets" should *sometime* pass through the expense accounts in the form of provisions for depreciation thereof. Questions as to time and rate, in this connection, are themselves the very subject matter, however, for a vast amount of consideration under the caption—"Depreciation." Thus we must accept the fact that *time* is an essential factor in the use of accounting arithmetic, and hence that the latter must obviously be so used as to reflect the operations of a business or its status for a given date or period—not in disregard of past and future dates and periods—but in a sensible relationship to those other, and particularly future, dates and periods.

Another limitation upon the accountant's use of arithmetical processes may properly be mentioned here, I believe. His arithmetic must produce a result that demonstrates as great a degree of accuracy as possible regardless of the nature of any *testing process* that may be applied. The existence of interests in conflict in respect to every utility may easily, although perhaps indirectly, so affect the accountant's use of arithmetic as to cause inaccurate results.

The program indicates that a distinguished gentleman will shortly discuss the nature of statements and accounts for *management* and *labor*. I mention the matter only to emphasize the point that the accountant's arithmetic must be accurate and produce results understandable not only from the standpoint of management and labor, but also from those of the customer, regulating authority, the senior security holder and ultimately from that of the sometimes nearly forgotten man—the stockholder.

Unless the accountant's arithmetic is

always so used as to produce fair and equitable—I was tempted to say honest —results from the points of view of all of the interests just mentioned a bias may creep into his arithmetic that will cause future criticism of both himself and his results.

As illustrating the effect of such diverse tests, consider Dr. Kester's famous elephants.*

The accountant dare not be blind. He must do his "figure making" not solely with reference to the viewpoint, desires and predilections of the rate regulating commissions, which have recently constructed a new set of accounts to assist him in so doing, but also with deference to the not always identical point of view of the Securities and Exchange Commission, which champions principally the cause of the holder of senior securities, and further still, in such a way as to meet the practical needs of management and the stockholder. He is obliged to see to it that to each of the Caesars are rendered the things that are his due.

It may be said that *nobody* can reach such an objective in his use of arithmetic. Perhaps so, but every accountant is required to *try,* and to approach it as nearly as human capabilities will permit in his particular circumstances. The current tendency on the part of governmental bodies, the public and the stockholders to place increased reliance upon the internal accountant is highlighting most clearly the responsibility he has, and has had, in this direction.

One instance out of the many in which the accountant must use his arithmetic with care and due regard for the calendar has to do with the capitalization of administrative and other overhead costs in connection with the construction or installation of items chargeable to plant accounts. It is to be presumed that this body is in accord with a statement of accounting principles developed during the current year by a committee representing both your industry and the gas utility business, and therefore that you find acceptable the following brief quotation therefrom:

> ***"Depreciation Accounting"*** **is a process for charging Utility Operating Income with the cost of depreciation (viz., the excess of cost over net salvage value, measured at the time property is retired from service), over the useful life of property as nearly as the latter may be estimated."**

With that premise it follows that any sums capitalized as administrative or overhead cost in any given year will, in the application of the accountant's arithmetic, represent a component part of the provisions thereafter made for the depreciation of the plant items to which the overheads apply. Thus in capitalizing overheads we do not ultimately eliminate them from the expense accounts, but merely transfer them from a current accounting period forward to a subsequent period of accounting years. If we can for illustration assume that the overhead costs in a given case represent 10 per cent of the total book cost of the plant items involved, and that these plant units are utilized for a period of ten years, after which they are withdrawn from service, then 10 per cent of the depreciation provisions appropriately made in the 10 years will be required to provide for the write-off of the overheads capitalized as stated in the assumption.

Further, if we were to continue this illustration unchanged through a considerable period of years, capitalizing each year the same sums, we would quickly arrive at a year when the provision for depreciation applicable to the capitalized overheads will equal the overheads then to be capitalized. If one were to approach this matter of overhead capitalization, then, with the conscious intention of leaning unduly toward relief of one year's operating expense account, he must in the same breath recognize that he is casting an undue burden on the expense accounts of subsequent accounting periods.

I do not suggest that any one formula can be adopted for the determination of the amounts of overhead costs actually incurred. On the contrary, no one formula will fit all circumstances. However, having in mind the accountant's ingrained abhorrence for the showing as net income of any dollar not earned, and accepting the fact that any amount of overhead capitalized this year means provision for depreciation thereof next year and for a good many years to follow, it would appear that the arithmetical computation of overheads to be capitalized will be done by such formulae as will limit to sensible proportions the amounts computed as representing overhead cost to be charged to plant accounts.

If the illustration is an adequate one it perhaps represents in effect merely a demonstration that "what goes up must come down," or in this case that whatever gets into the plant account in the way of cost must be amortized by way of depreciation or other comparable provisions. Otherwise stated, the arithmetic should take due cognizance of the inevitable habit of chickens coming home to roost.

Reverting to the foregoing illustration, but with a supposition this time that the accountant involved were not one of us, but one who would be willing to sharpen his pencil, scratch his head and dig up a way of calculating a greater amount, or percentage, of overheads to be capitalized—and any reasonably able accountant can do it—and supposing this greater amount to represent 15 per cent, instead of 10 per cent, of the total book cost, it is obvious that his arithmetic will now operate to reduce the apparent expenses of the current year by an additional 5 per cent of the book cost of the year's investments in fixed property. With sizable property investment, this 5 per cent may mean a reasonably large number of dollars. But the reverse side of the picture in inescapable, in that the expenses of the years assumed to be the period in which the items of plant involved are used will in such case be burdened with depreciation charges just enough larger than in the first illustration to offset the added amount included in the first year's fixed capital cost.

Use of the term depreciation, in the sense of amortization of fixed property cost, in the illustration just used is perhaps not essential. Suppose, for example, that instead of amortizing the fixed property cost, including the capitalized overheads, in the ten years assumed as the useful and actual life of the property items involved, the fictional accountant had chosen to avoid completely such amortization, or any provision in lieu thereof. The day of withdrawal of the property from service would have come at just the same date as if amortization had been provided, and the lack of provision for amortization would merely have had the effect of requiring that the entire book cost of the property be charged off to Surplus Account? Hence the net result of failure to provide adequately during the period of use for amortization of the book cost would be misstatement of the net income throughout the ten years assumed as the useful life of the property, the misstatement being brought up short when the day of retirement of the item of property arrived.

Suppose we consider another type of arithmetic problem, that which relates to the point of distinction between maintenance, or maintenance expenses, and construction, or charges to plant account. It is commonly recognized that a very

*See Dr. Kester's address in this issue.

fine and carefully drawn line must be established and consistently observed if proper distinctions between maintenance and capital expenditures are to be continuously made. Any good accountant could define a line of distinction in such a manner as to cause a great many expenditures to be capitalized, that might, with a different line of distinction, be charged to maintenance expense. Again, the distinction could be so drawn as to cause many expenditures to be charged to maintenance that might otherwise be capitalized. The question is only whether smaller or larger property retirement units shall be used. Whoever the accountant may be, and whatever his tendencies toward burdening or "laying off" plant account, the extremely important objective to be attained is CONTINUITY in adherence to the *same* basis for distinctions between charges to maintenance and plant accounts if inconsistencies between successive scenes of the financial motion picture are to be avoided. That is, if certain kinds of expenditures are in some years charged to expense as maintenance and in others capitalized, it follows arithmetically that the operating expenses of certain years are relieved to the extent of items so capitalized in those years, whereas other years in the series not only bear as maintenance the inconsistently treated expenditures made in those years but also, as depreciation, some share of the inconsistently handled expenditures made and capitalized in other years of the series. Efforts are currently being made to bring about a greater degree of uniformity on the part of all utilities, in all jurisdictions, in respect to distinctions between maintenance and plant account charges, but even without such uniformity *among utilities* continuity on the part of a single utility in the use of such a definite line of distinction is required if apparent results are actually to be comparable from year to year. Primarily, the principle here involved is identical with that in respect to inconsistencies in formulae used in the capitalization of overheads. The long-term operation of arithmetical processes is such that the expense accounts can gain no permanent relief from any temporary shifting of the line of distinction between maintenance and capital expenditures. If maintenance doesn't catch you, depreciation must and inexorably will, by way of charges either to expense or to surplus.

An effect of a change from larger to smaller retirement units that might escape attention for some time, if depreciation provisions are actually being computed on the basis of past retirement experience, is that, following the change, charges are made to property account that have not theretofore been so accounted for, whereas the effect of the addition of the new charges to the property account has not yet found its way into retirement experience and hence into the calculation of amortization provisions.

As regards the relationship of plant account charges and ultimate depreciation provisions I have assumed a "cause and effect" connection, but since accountants do not all subscribe to the use of any one formula for apportioning amortization provisions from year to year, I have tried to avoid a statement that a given "cause" in the matter of capital account charges necessarily produces a given "effect" in a particular later year. If any sum properly charged to plant account must be retired therefrom at the time when the plant item represented actually ceases to be used, then it follows that the accumulated *expense charges* during the period of a plant item is used, or surplus account charges at the end thereof, must necessarily reflect the writing off of the book cost of the plant item and that, regardless of the incidence of the amortization provisions from year to year, the arithmetical problem must prove out at the time the plant item involved ceases to be used.

I have spoken of a single item of plant in referring to relationships between the plant account and provisions for retirement, whereas property accountants in the utility industry customarily have to deal with plant accounts representing the cost of a myriad of items whose accounting identity must be sacrificed if property accounting costs alone are not to rival depreciation provisions in relative amounts. The sheer number of items in the plant account does not, however, give any new and unusual character to any given item. In consequence, while we may adopt means of computing depreciation provisions on certain over-all bases, instead of by single units of property, the adoption is not a recognition that any new principles of arithmetic are actually involved. It would still be the intention, I believe, that the arithmetic done on an over-all basis should work out as nearly as practicable to the same answer, at any given time, as if corresponding computations could be made based on the cost of separate plant items.

Perhaps the single point upon which opinions of accountants most differ as regards the proper arithmetical processes to be adopted is that having to do with the development and application of formulae for the amortization of utility plant costs. Since this matter is one that has been given an extraordinary amount of attention by various groups of accountants and others right up to the present time, and is in prospect of receiving still more of such attention, it would be quite inappropriate for me to refer to it in any but its arithmetical aspects.

The really important objective involved in the selection of a formula for the computation of depreciation provisions is that, whatever its terms, it shall produce in a reasonably common sense way an ultimate accumulation of depreciation provisions equal to the cost of an item of plant within a period of years in which continued usefulness of the plant items can be anticipated with reasonable confidence.

An adequate provision for depreciation, no matter how arrived at, is infinitely to be preferred over an inadequate provision computed upon the basis of the finest and most intricate formula that could be devised. The simplest arithmetic, correctly applied, may give a sound result, where the most elaborate application of integral calculus on a wrong basis will give an unsound one.

It is to be constantly remembered that any formula for computation of depreciation provisions is not to be contemplated chiefly as an end in itself, but only as a means. Its sole purpose is to provide that the cost of long lived property used up in the operations of the utility enterprise shall as surely as possible be recouped for the investor out of the revenues produced by those operations. As an ideal, the purpose of making depreciation provisions is not different from that of charging to expense the cost of any short lived commodity, like coal.

In choosing among various arithmetical processes one that is to be relied upon to insure the ultimate accumulation of adequate depreciation provisions, would it not be advisable to consider thoroughly, as against the long term merits of the pleasingly slim but temperamental young formula whose present appetite will represent only a small drain on our income, but whose cost of upkeep is likely to grow exceedingly as she becomes older, the alternative merits in the same long term period of the presently more matronly looking

formula whose figure is of more comfortable proportions and whose cost of upkeep will, because of that fact, remain for the rest of her life at about its present level? Alliance with either is for life, and cannot be dissolved at will, if and when the rising cost of upkeep causes our affection to cool.

Two types of cases have been mentioned where questions may arise as to what constitutes cost, in respect to capitalization of expenditures. I might suggest, also, that each one of us probably has encountered entire items of expenditure the capitalization of which may be dubious. The same observations apply to a choice in any such case between capitalizing the expenditure or charging it to expense that apply in respect to capitalization of overheads and to the distinctions to be made between plant account and maintenance charges. Simply expressed, the capitalization of a dubious item should automatically, with proper accounting arithmetic, bring about correspondingly increased provision for amortization.

Have the illustrations cited any common significance? Perhaps they have served to show, as many others of diverse natures could, how frequently, and in what important ways, accountants must choose between the alternatives of making charges to the current expense accounts or causing the deferment thereof, sometimes far into the future. Perhaps they have also served to show the arithmetical certainty of the passage of any given expenditure through the expense accounts at some time or other, and hence the lack of any permanent benefit to be obtained from deferment insofar as the holder of the utility's securities is concerned. Perhaps another significance may also be drawn from them, namely that the security holder's interest may suffer actual and irreparable detriment from deferment of any charges not definitely and logically assignable to a future period.

Obviously, the mere fact that an item is charged to current expenses instead of being deferred into a future period is no guarantee that current utility rates will provide reimbursement therefor as well as an adequate return on the utility's property value. However, if there is any uncertainty in this respect, is it not immensely more uncertain that future rates will provide revenues sufficient to insure recoupment of the monies represented by charges unecessarily or inappropriately deferred from the present into those future periods? It is to be remembered that conceptions of proper rate making processes are presently, and always, changing or in prospect of change, and that the mere presence of a certain number of dollars in the property account does not guarantee any particular treatment of the sum involved when a utility's rates are under review.

Conservative approach to these questions of deferment would seem to require the accountant to take a flatly realistic view, on the basis of which he might look to the future not as a rosy term of years in which his utility will be able to make collection of any charges he may find a plausible occasion to defer thereto, but as a period, instead, wherein it will be difficult to obtain revenues sufficient to provide the bare necessities in the way of then current expenses and return. In the long run, I believe our regulating authorities, and the customer as well, would respect such an approach to today's problems in the arithmetic of utility accounting.

Some years ago, when even conservative banks had closed, a friend told me that his interest in a certain building and loan association was his best investment, and was paying out strictly on schedule. I asked if he had any theory as to the reason. He said, "Because the board of trustees is made up of the three worst pessimists in the country." I am no advocate of pessimism as such —as a school of philosophy. But a healthy, active skepticism as to the future favor of the gods will accomplish a great deal toward holding us fast to the solid foundation of realism and reasonable certainty.

If I am charged with temerity in making these remarks, I will claim in defense at least a limited experience in the things of which I have spoken and some observation of consequences recently met that grew out of failure—a generation ago—to provide for expenditures which then might appropriately have been charged off.

The Relation of Accounting Statements and Reports to Security Issues

(*Continued from page* 538)

The actual description ran to several thousand words including definitions. It was couched in legal language with a generous sprinkling of accounting phrases and concepts. Mr. Neff's proposed solution was compressed to less than two hundred and fifty words without loss of the essence of the provisions.

Next, there is the question of repetition of identical or substantially similar material. In many cases where several sets of financial statements are filed much of the required explanatory information is pertinent to captions in several balance sheets, schedules or other statements. The easy way is to repeat. A more workmanlike method is the judicious use of cross references. Perhaps the most satisfactory method in many cases would be to draft an integrated statement covering these matters as a sort of additional financial statement to accompany the usual balance sheet, profit and loss statement and related schedules. Precise references would then serve as a link to the financial statements with no loss of utility, with much saving of space, and, I think, with the result of obtaining an integrated, readable document. This same treatment could be extended to care for situations in which no single, clear-cut accounting principle has been recognized. In such cases, the necessary explanation of the substantive factors motivating the choice made between alternative principles could be set forth once for all, and references thereto included wherever appropriate.

Finally, there is the possibility of developing new forms of statements with the special interests of investors in mind.

These are but a few of the methods which you will recognize as aids in making your statements intelligible, or, if you will, simple in the true meaning of the word. Brevity, an equally desirable objective, must be thought of as a relative term, dependent for meaning on the underlying conditions and on the purposes to which the final product is to be put. Moreover, those who are familiar with the business can best apply these guides so as to achieve our mutual objective—the presentation of comprehensive and dependable statements that are intelligible to the investor.

Organization for the Maintenance of Continuing Property Records

By Will-A. Clader
Certified Public Accountant

An address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 14, 1939

THERE is no subject which it is more important to study carefully, none about which it is more necessary to think clearly and speak responsibly, than utility plant records which have recently been termed continuing property records.

We must begin, I believe, by recognizing as one of the great circumstances of utility private existence, the fact that governmental regulation is here to stay. We may like or dislike this fact; we cannot change it for the invincible reason that for several centuries public interest would not be downed. It follows that sincere cooperation and understanding be had between utilities and regulatory bodies in this matter.

Certain commissions in 1933 required specifically the maintenance of perpetual inventories, to show "a complete description of each unit of property and the cost thereof," and "for each item of one or more units the date of acquisition (or construction by the accounting company or any predecessor thereof), the date when first placed in service, the location of the property," etc. The utilities objected to this principally because of the anticipated cost of establishing and maintaining such records, some attempting to maintain that a perpetual inventory is of no value.

It is evident that the commissions were not satisfied with the plant records which were kept, and knowing that most industries kept excellent plant records, they believed that utilities could and should keep comparable inventory and cost records of their property. So the utilities have made a virtue of necessity.

Much of the work of establishing or initiating the record has been accomplished. It is to be expected that the permanent organization for currently recording additions, betterments, retirements, and replacements of property will not be as large as that needed during the period of travail. The problem of determining a current working plan with all its incident uncertainties, complexities, and perplexities, is now demanding decision.

There is little unanimity of opinion about a proper organization for the maintenance of continuing property records, and many different types of organization prevail.

Some companies which had a valuation department independent of operating, engineering, and accounting departments, which maintained statistics without regard to actual cost of the property have placed the new property records including all its features, costs and other, in that department, independent of other departments. Some companies have organized a new bureau in the accounting department. Some have placed upon the engineering or operating department the responsibility of maintaining the basic records of property, consisting of maps, sketches, pole cards, wire diagrams, meter and transformer cards, which basic records contain the location and installation dates. In such instances, the control of the summaries of units and the cost data are maintained by the accounting department, and that procedure requires periodical reconciliation with the records of the operating department. Some companies have created a new independent property records department.

There is a sharp diversity of opinion about the functions of the permanent organization and the line of demarcation between the responsibility of the accountant and the engineer—meaning, of course, whether the records shall be kept in a section of the comptroller's department or in the construction and operation engineering department. The question raised by this divergence of opinion merits the most careful consideration.

The commission orders prescribing the establishment and maintenance of continuing property records remind one throughout that the system of *accounts* provides for a determination of the original cost of electric plant and the classification thereof by prescribed primary accounts, that the "continuing property records" or "perpetual inventory of the units of property" are "additional electric plant records to, and in support of, said prescribed primary accounts," and that the record shall conform to the fixed capital accounts.

The Federal Power Commission, of course, is concerned in this matter only with the proper observance of its instructions "in *accounting* for additions to and retirements and replacements of electric plant." I do not say that it means to imply that it stipulates that an accountant, as the designation is commonly understood, shall be the accountable technician; but I believe it is an inescapable fact that the books of accounts are in the mind of the commissions in connection with its ideas of property records. The primary responsibility to the commission is of the utility; but the accounting or relation of particulars to be rendered will probably be received by the Bureau of Accounts, Finance and Rates of the Federal Power Commission, the chief of which is an accountant.

After all, accounting is defined as "an act or system of making up or stating accounts; a statement of accounts, or the debits and credits in financial transactions." It therefore seems that the commission requirement is in connection with accounting as it is commonly understood.

While I grant that a reckoning, compilation, calculation, enumeration, a record of some reckoning, a statement of facts or occurrences, recital of transactions cannot be claimed to be an accounting department function in every instance, I believe that we must give due weight to the relation of the use by the commissions of the words "accounts" and "accounting." I cannot escape the conviction that the commission requirements is with recognition of the generally accepted meaning of the term "account" which is, in the field of business, a reck-

oning of money transactions, a record of pecuniary transactions, a statement of business dealings. In corporation organizations of today the responsibility of the accounts is that of the accounting officer.

I have not heard any suggestion that operation accounting in large companies should be in charge of the operation engineers, yet if the responsibility of fixed capital accounting is to be assumed by engineers instead of the accounting officer, such a suggestion would not be incongruous and there would be small need for an accounting officer. A general ledger bookkeeper would suffice.

On the other hand, there is nothing incompatible in keeping any kind of cost records in a department independent of the accounting officer, nor even under the sole jurisdiction of the construction department. Some reasons could be conjured up even to keep the detailed operating expenses records in the operations department.

Let us examine briefly this statement which may seem heresy. The subject is not a cold mathematical problem. The accounting department is dependent upon other departments for most of the information which it records and collates. The operating and engineering departments originate the request for authorization, work order, bill of material, sketch sheets, material used reports, time and automobile records, transformer and service orders. These are subject, of course, to audit, but the primary responsibility rests upon the accounting department.

Therefore, records of costs and quantities may be kept in subsidiary records by departments other than the accounting department, with the controls and audit of the subsidiary records under the accounting department. The point here is whether that procedure is practical, and whether it is advisable to decentralize the accounting work and the responsibility therefor. In my opinion, it will be found by experience from the nature of the record that all the accounting for costs of property changes should be kept under the responsibility of the accounting officer.

The wide divergence of opinion about the general methods and specific procedures pertaining to the property record system, causes one to pause and consider whether it is susceptible of a close approach to uniformity.

There are those who believe that the necessity of no two companies are comparable, and that it is not practical to set up an organization and a procedure that would be adaptable to all companies. Uniformity of principles is vastly more important than superficial uniformity of form. There are certain basic principles which are fundamental in the operation of such records, such as the distinction between a continuing property record unit and a retirement unit, so I believe that it is possible and desirable to devise and develop forms and procedure that can be applied to small companies as well as the large ones, so that there will be fundamental uniformity in the information available to the commissions.

There can be no doubt that the utilities know from experience what plant records their operations require. Have they a clear conception of what the regulatory bodies require in their recent exaction? Are they interpreting too literally the instructions? It may be that utilities and Commissioners are viewing with grave concern the expense incident to the execution of the work and the elaborate detail.

Because of excessive cost that may not be compensated for by the value of the record, some fear that it is practically prohibitive to maintain property records in continuous form in the minute detail that now seems imposed.

A simple and economical procedure and organization must be the objective, so one must measure the cost of maintaining voluminous details with the usefulness of the information, and must keep within the economic limitations.

Estimates of the cost of keeping the records cover a wide range. I have heard mentioned $0.22 per thousand dollars of plant investment, also $0.50.

The specific property accounting requirement has exerted more influence on utility accounting and the method of property accounting than anything in my memory. It is the hardest problem of accounting and engineering statistics encountered in years. It has changed the terminology of plant accounting, a thing fixed, set, adamantine. A requirement that can do that thing is worthy of notice, but when that thing can make itself the center of a controversy that is raging from the pine clad hills of Maine to the sunny beaches of California and from the border of Canada to the fragrant orange groves of Florida there must be something unusual about utility property accounting and records.

Accountants are amazed by the suggestion that they are not to be accountable for 85 per cent of the assets in the balance sheet.

Engineers are bewildered by the suggestion that the maps and other physical property records, and the valuation procedure, which have been their life work, should be divorced from their department, even if they are not to be denied the privilege of visiting the new bureau like a public library.

Who is winning in this professional rivalry for the responsibility of keeping continuing property records? I think it is too early to predict, but there are many indications that the engineering departments feel that the costs are a major part of the record and seem willing as a rule to rely upon the accountants to assume the burden of this gigantic task. It is in a level and sober mood that this must be considered, not in a stew of high stress.

Developments show that accountants and engineers are able to live together if their mutual capabilities are respected and both are determined to do so. They have been working cheek to jowl for a long time.

There are no conceivable differences in the object of accountants and engineers in this problem. Neither has any interest whatever except the desire for accurate, sufficient, and economical plant records. There has been cooperation in the past, and a basis should be established for the extension of this cooperation. Only mad fantasy can conjure up points of dispute which might lead to misunderstanding between the two.

The required continuing property record as it has been construed by the utilities is a giant in swaddling clothes. It will take time and much serious thought to reach satisfaction.

I am not going to attempt to outline in detail an organization for keeping property records because no two of solemn pundits would agree with me; but I think that each company should not be a lone wolf in its methods as an identical requirement is imposed upon all companies by the commission.

As the maintenance of the property records is a combination accounting-engineering job, the quantity and cost records, in my opinion, should be kept in a section of the accounting department headed by a fixed capital accountant with practical knowledge of the physical characteristics of property, preferably with some engineering and construction training and experience, and experienced in

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An Engineer's Comments on the Control of Continuing Property Records

By H. R. Martz
Vice-President, Day & Zimmermann, Inc.

Presented by George M. Vesselago at the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 14, 1939

THE basic problem under consideration is to relate some dollars to some physical property and to maintain that relationship. Nothing could be more simple in prospect or more difficult in retrospect.

We have been working at the problem in a number of directions for more than two years and while we have considerable pride in our accomplishment we at the same time exhibit a number of scars in mute testimony of the thorny path we have trod.

A major difficulty is the constantly changing aspect of the physical property on the one hand, and the necessity for the allocation of charges by certain members of the operating organization between operation, maintenance and construction, on the other.

In our approach to the problem we early recognized the necessity of establishing a schedule of the physical property as a part of the operating records so that all changes would be automatically reflected and the record would be currently maintained and readily available for any purpose for which it would be required. The practicality of this concept has been confirmed during the course of our work and for purposes of illustration we will outline the methods employed in the treatment of outside plant which perhaps is the most difficult of all to handle from the standpoint of control.

Our approach involves three principal features. First, a map of the outside plant which shows the property and is maintained by the engineering department, supported by detail maps and records which carry cross references to job orders. Second, fixed capital ledger which shows the cost of this property and is maintained by the accounting department, supported by detail ledgers and records which carry cross references to the same job orders. Third, the job order procedure which prescribes rules for the recording of the construction, retirement and maintenance activities as carried out by the operations department, and is thus the key to the control over the records of both the property and the investment therein.

The job order procedure provides among other things for such information in the records as will facilitate the carrying out of the policy defined from time to time in respect to retirement in connection with replacements of the items of property. These items are construction assemblies, that is groups of materials so associated as to form an individually functioning whole specified as to size and type, for instance a crossarm assembly in place. Construction assemblies are convenient for use in designing and recording for engineering purposes and also for estimating, cost determination and inventory purposes. Continuing Property Record units, on the other hand, are comprised of one or more construction assemblies, and are those items of plant which are shown on engineering maps used for operating purposes.

Each job requires certain preliminary work by members of the engineering department and involves origination of request for new facilities and the necessary study of existing facilities from engineering records supplemented by field inspection as required. An estimate of the cost of construction assemblies to be installed or retired is prepared for each job in the form of a Construction Schedule and Cost Statement which serves as a basis in requesting approval. The schedule also serves after completion of work as an inventory of the output of the job and as a statement of its cost. It is based upon the construction drawing and instructions for the foreman which are prepared by the layout engineer. Each job is given a number shown on the Work Instruction form which furnishes information necessary for approval to perform the work and also serves as a notice to the plant accountant that he may receive charges in connection with the job and to the foreman that he may proceed with the work.

Work dispatching is carried out by the district foreman who is a member of the operations department and involves a review of the conditions on the job to be done, scheduling of the work, assignment of the crew and distribution of working papers which serve to inform those concerned of the job number to which charges are to be made.

These charges result from the "input" or use of material, labor man-hours, transportation car-hours and such other components of direct construction cost as services of contractors and rented equipment. Reports of construction input from the foreman are currently reviewed by a field representative of the accounting department as the work progresses for the purpose of insuring the applicability of charges to each job and the identification of all reports of construction input by job numbers. Following the review this accounting representative records daily such elements of input as are necessary for control.

The "output" as referring to construction work is the construction assemblies actually installed described as to kind and quantity on the drawing or sketch of the job which is revised as necessary by the foreman. The correct quantity of output is not necessarily the same as the input of the principal materials used. For example 3,000 ft. of wire issued from the storeroom and used on the job will produce an output of say 950 ft. of 3-wire circuit, as will be shown by the engineering circuit maps.

Engineering records such as circuit maps are revised as a part of current routine and serve to assist in designing extensions and alterations as well as in maintaining the plant in safe and efficient condition. At the same time running inventory summaries of Continuing Property Record units maintained in connection with these records are also revised by the same members of the engineering department. The specifications and quantity of units entered in the en-

gineering records and running summaries are based on the data shown on both the construction drawing and the job schedule.

As the work progresses, charges and credits resulting from the input or use of material, labor man-hours, transportation car-hours, and other items of expense are computed in the accounting department. Entries in respect to these charges and credits are made on work-in-progress job ledger sheets. For jobs done under annual capital authorizations the entries are made on a ledger sheet common to all jobs under all annual authorizations.

The determination of job cost is made by the plant accountant substantially by the same method as was used in the determination of Original Cost. The cost determination in connection with both the construction and retirement is made on the basis of the previously mentioned schedule of construction assemblies listed on the completed Construction or Retirement Schedule and Cost Statement form, prepared in connection with each job, which is forwarded to the plant accountant by the field representative of the accounting department after it has been annotated to show that the engineering records had been revised. Job cost determination involves the following steps:

1. Proof of ledger balance
2. Application of overheads.
3. Relation of job cost to construction assemblies.

Job cost determination procedure is utilized for purposes of control of both the cost and the inventory of property. It provides for control of the reasonableness of construction costs by the use of estimates based upon studies utilized in the determination of Original Cost. It provides for control of the reasonableness of retirement costs by the use of average costs for each year of installation developed in connection with the same Original Cost studies.

Job cost determination procedure also provides by means of the proof of ledger balances for elimination of errors with a minimum of effort. The errors may occur both in the construction schedules which show inventories and in the job ledgers which show cost. Compensating errors which may elude the proof of the ledger balance of one job are revealed either in connection with such proof of another job or as a result of periodic comparisons of the running inventory maintained in the accounting department with the running summaries of engineering records maintained in the engineering department, both of which summaries show additions and deductions of units with references to the job order numbers.

Additions and retirements are posted to fixed capital ledger, supported by detail ledgers for each of the plant accounts, on the basis of the job costs, and the ledger balances, therefore, at all times reflect the cost of the property whose inventory is reflected in the engineering records.

In conclusion it must be clear that the successful operation of the procedure outlined requires the close cooperation of all departments of the operating organization. The responsibility is not primarily accounting or engineering or operating but rather one of management in which the contributions of the various departments of the organization are directed and coordinated most effectively from the standpoint of the desired objective. By reason of the changing aspect of the physical property any procedure established will fail over a period of time unless definite responsibilities are established in the various departments of the organization and the individuals assigned the same are held to strict accountability. Superimposed on the various departments should be a coordinator whose responsibility is to keep in touch with the details and report to the operating officials with respect thereto much in the same manner as budgetary control is handled.

Supplies in the Navy Department

(*Continued from page* 522)

The "counter" records on a blank card, the standard stock number, and quantity found. These cards are dropped into a tray in strict numerical order. As fast as a floor section is finished, the cards go to a bookkeeper who checks against the stock cards the quantities entered on the inventory card. If the amount on an inventory card is not in agreement with the stock card it is sent back to the inventory crew where the item is checked by a different counter. He is given no indication of the amount expected. This re-check usually discovers the difference, which more often than not, arises from incorrect stowage. If, however, the second counter agrees with the first, as to the difference, the card is returned to the Chief of Inventory, and a final recount made, with the regular stockman in charge of the class, present as a witness. Once the inventory has been taken, and proved as to quantity, the bookkeeper makes an adding machine tape of the inventory values, just recorded on all the stock cards concerned, and another bookkeeper checks this tape. The final result is recorded as a report of inventory, and compared with the ledger balance for the class. If the difference exceeds a few dollars, investigation is ordered. This takes the form of an audit of all postings, totals, etc. Any considerable number of errors found, on the part of any poster, results in disciplinary action.

This system of inventory enables counting of thousands of items in a few hours, while the final check seldom takes more than two days.

Strategic and Critical Materials

You have seen much in the newspapers lately, in regard to the creation of stock piles of strategic and critical materials. These are not needed alone, for the direct use of Navy Yards or Army arsenals, but for the industrial requirements of the nation. The present outbreak of hostilities in Europe has already caused some interference with our import trade, and may be expected to be a source of increasing difficulty in maintaining a flow of goods to this country from foreign sources. The United States is not yet faced with the question of a shortage of any essential supplies, for either military or civilian needs, but the present situation brings home the necessity of safeguarding our interests by the creation of adequate protective stocks of essential materials which are not produced in this country, or which cannot be produced in adequate quantity, within the time required, to meet national needs.

The Controller's Job

(*Continued from page* 519)

when I first entered the employ of the industry as a boy of sixteen, some thirty odd years ago.

That, ladies and gentlemen, is the power industry of America; that is the industry in which the controller holds an executive office, a position which offers great opportunities to those of us who would be more than technicians—that is my Alma Mater, as it is yours—I submit, in all good nature, that no university, no college, no school, no industry, no commercial enterprise on the face of the earth can approach its matchless record!

Industry Reporting Within a Rationalized System of Federal Statistics

By Stuart A. Rice
Chairman, U. S. Central Statistical Board

An address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 15, 1939

I COME before you as the representative of a Federal agency which has no direct interest in obtaining information with which to regulate or tax the utility industry. On the contrary, an important part of my job and that of the Central Statistical Board is to attempt to minimize the reporting burdens placed upon business by Government. In saying this I do not mean to disparage the functions of those agencies engaged in gathering business information. However, the fact that the Board does not itself collect reports will assist me, I believe, in speaking to you without bias and on a sympathetic level.

The role of the Federal Government in respect to information-gathering within the economy as a whole is not dissimilar to that of a trade association within the industry or trade which it serves. The association is able, by the collection of information from each of its members and otherwise, to note general changes in production, in sales, in price levels, in consumer demand, and in the activities of related kinds of business. Turned back to its members, such information is usually of value to each of them. If this is true, as I believe, of the Edison Electric Institute in relation to the utility industry, can it be doubted that the functioning of an industry supplying electric energy and power to nearly 30 million consumers, having assets of over 15 billion dollars and an annual payroll in excess of one-half billion dollars is of considerable importance to the national economy and to those charged with formulating the policy of our Government?

I should like to cite an incident which indicates, better than any I know, the paradox which so often confronts report-collecting agencies, whether in business or in the Government. It illustrates the duality of interests exhibited by business men with respect to the preparation of reports—in this case for a Govenment agency. A few years ago when I was Assistant Director of the Bureau of the Census, we received from the president of a well-known manufacturing establishment a forcefully worded letter protesting against the large number of reports required from his concern. A few days later an emissary of a trade association, to which this manufacturer belonged and of which he was the largest member, came to my office to plead with us for an elaboration of the Government's data respecting this industry.

Less than a year ago, at the request of the President, the Central Statistical Board reported to him upon the "Returns Made by the Public to the Federal Government." Our study indicated that no less than twelve Federal agencies have periodic occasions to collect information concerning the utility industry. Their interests vary from the regulation and taxing of the industry by the Federal Power Commission and the Bureau of Internal Revenue to those of the United States Employment Service and the Social Security Board relating to employees. This situation illustrates the more general problem. In all, 88 Federal agencies engage in collecting questionnaires and reports from the public including both business and the private citizen.

The easy panacea, most often suggested, is the physical consolidation of all report-collecting services of the Government in a centralized statistical office. Upon mature study this solution is almost invariably rejected and the conclusion is reached that the divorce of statistical and report-collecting units from the administrative organizations which the information is meant to serve would not be feasible. A single centralized agency collecting information on everything from the operation of railroads to home-working conditions in the tufted bedspread industry would not serve to best advantage the factual needs of the administrative bodies designated to administer the Interstate Commerce Act and the Wage and Hour Law.

How then can this problem best be met? How can the report-gathering services be rationalized and welded into a coherent whole? It is my contention that the present decentralized statistical system should be allowed to remain and that provision should be made for the continuing coordination of its component parts. It was, in fact, for this very purpose that the Central Statistical Board was created.

You will notice that I say for the *continuing coordination*. . . . I wish to emphasize that particular point, because I do not believe the coordination of our statistical services can be accomplished as a one-time job to last happily forever after. It must allow for improvements in method and for changes in personnel. It must follow the assumption by the Government of new functions and the abandonment of old. As a case in point I will cite the Social Security legislation. In the Social Security Act as first enacted two different titles provided two different bases for the computation of taxes on salaries and wages. For the purposes of old-age insurance, taxes were to be based on wages paid while taxes for unemployment compensation were based on wages payable. From the standpoint of the employer this meant keeping two sets of payroll records; one on a cash and one on an accrual basis. It is only in the past year, after the Act has been in operation for several years that this discrepancy has been eliminated.

The Central Statistical Board was created in 1933 by Executive Order and operated under a series of such orders until 1935. Although its work during that time was principally related to the depression emergency, Congress believed its value to be such that the Board was continued by statute in 1935. The Board now consists of 14 members including

its chairman, who is the only member devoting full time to Board duties. The remaining members represent the more important report-collecting arms of the Federal services with the exception of one non-governmental member—at present, the Secretary of the American Statistical Association. Briefly, the Board's functions are to coordinate the Federal statistical services and in general (1) to promote economy in the collection of reports, both to the Government and the public; (2) to minimize the reporting burdens which Government places on the public; and, (3) to improve the information made available.

The simple statement of these three objectives tends to over-simplify the actual problems confronting the Board. Consider if you will, 88 agencies each zealous of a particular vested function which it views as a vital public interest. Consider also the fact that in many cases statutory enactments have made it mandatory for agencies to collect, compile, or collate certain information without regard to the circumstance that previous enactments have already vested similar responsibilities or powers in another agency. But are there not parallel questions on the other side of the shield? Suppose, for example, that the option should be granted to business concerns of reporting to one Federal agency rather than to two; or that the requirements of a report to one agency should be satisfied by reference to a report or part of a report to another agency, would the business respondent in all cases take advantage of the privilege? Might not vested interests again be encountered? Is the lawyer, accountant, or consultant who has long prepared certain Government reports going to modify his habits voluntarily or leap at the opportunity to eliminate his job? In his paper yesterday, Mr. Bohl described the efficiencies resulting from the work of "development men" in his company. Using the same language, we of the Central Statistical Board seek to be "development men" within the Federal report-collecting mechanism. If all business concerns were as receptive to innovations and improvements as the company represented by Mr. Bohl the preceding queries would clearly be lacking in any point. As it is, the degree to which they are pertinent or impertinent I leave to the more competent judgments of my listeners.

The Central Statistical Board was created as an advisory agency. With the approval of many who participated in its early tasks, the Board was given only power to review, advise and recommend. It could not require the elimination, organization, or revision of any statistical functions. During the years of the Board's life—and I have been a member of the Board since its inception—some who supported these limitations have modified their opinions. Based on our experience and growing to some extent from the study to which I earlier referred, we have developed certain recommendations designed to rationalize our system of Federal statistics and in the process to confer more authority upon the Board.

WHITWELL HONORED BY ASSOCIATES

A silver service and testimonial from members of the Modern Kitchen Bureau in recognition of his outstanding services as Chairman during the first four years of its history were presented this month to George E. Whitwell, Vice President, Philadelphia Electric Company, by the Bureau's new Chairman, Walter H. Sammis, Vice President, Commonwealth and Southern Corporation. Left to right: Mr. Whitwell, Charles E. Swartzbaugh, President, N.E.M.A., H. L. Martin, MKB Manager, and Mr. Sammis.

I should like to mention three of these recommendations which were among the nine made to the President and to Congress in our report. One proposed that executive power be vested to order the consolidation of reporting services whenever two or more agencies were found to be requiring identical or substantially duplicating information from the same group of respondents. A second suggested a mechanism whereby so far as possible, all requests for information from a given group of respondents would be channeled through a single Government agency. The purpose of this recommendation was twofold. First, that such a channeling agency could build continuing relations with respondents and; second, that since all information received from such respondents would flow through this channeling agency, there would be less possibility for duplicate requests. The third recommendation was that consideration be given to changes in Federal tax laws which, so far as consistent with fiscal policy, would permit the consolidation of tax returns with other administrative reports.

It was our hope that legislation embodying these recommendations and others would be enacted at the last session of Congress. Before any legislative action was taken the Central Statistical Board and its functions were transferred to the Bureau of the Budget and that agency made a part of the Executive Office of the President. In view of this appropriate change in status, I am of the opinion that a substantial part of our recommended program can now be carried out through administrative action, without the need of legislation.

May I leave with you, in conclusion, three observations: First, that a certain amount of reporting to the Government on the part of industry and the public is a necessary outgrowth of our present civilization; second, that the report-collecting services of the Federal Government have not yet been welded into a rationalized and coherent system; third, that such a system can be achieved only through the coordination of Government fact-gathering agencies and with the wholehearted cooperation of Government and industry.

Benefits of Sound Depreciation Practices

By Asel R. Colbert

Chairman, Special Committee on Depreciation, N.A.R.U.C.

An address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 15, 1939

DEPRECIATION, like the poor, is with us always, and, whether we want to recognize it or not, the consumption of capital continues and the problems of depreciation are ever present. Many views and methods concerning depreciation have been proposed. Papers by the hundreds and volumes by the score have been written. The sinking-fund advocates have sought to attract interest to their theory. The retirement-reservists have advanced their method. The straight-line adherents have endeavored to straighten out matters, sink the sinking-fund advocates and retire the retirement-reservists. But, even though the subject has been one of considerable discussion for many years, real progress by the electric utility industry in dealing with depreciation is of recent origin.

A consideration of depreciation developments may commence with the accounting requirements contained in the system of accounts for electric utilities adopted by the National Association of Railroad and Utilities Commissioners in 1922. That system was prescribed by a majority of state commissions and its use became general throughout the country.

The 1922 classification of accounts contained no specific requirements for depreciation. Instead, retirement-expense and retirement-reserve accounts were provided and the instructions concerning the use of these accounts were somewhat general. The amount of retirement expense was not necessarily related to the life of property but was left largely to the discretion of management. Furthermore, appropriations to the retirement reserve were often influenced by the amount of available earnings.

Under the flexible provisions of such accounting regulations various methods of recording retirement expense prevailed. Some utilities charged retirement expense on the basis of lump sum appropriations, dependent on earnings; some based the expense on a combined percentage of revenue for retirement expense and maintenance; some computed it on the basis of the number of kilowatthours sold; and some based the charge on a percentage of cost of plant. Under these and various other methods, retirement reserves comparing favorably with full depreciation reserve requirements were accumulated in some instances. Generally, however, the reserves based on the retirement principle were small and had no true relation to the actual depreciation requirements. That this was so is indicated by the fact that at December 31, 1937, depreciation reserves of electric utilities for the entire country averaged only 11 per cent of the book cost of plant and the reserves for over one-half of such property base were only about 7½ per cent.

In recent years, dissatisfaction with the retirement-reserve method became general, particularly among utility regulatory authorities. The dissatisfaction was due perhaps not so much to the methods as to the results. Depreciation expense and depreciation reserves for tax purposes generally far exceeded the book amounts. In many instances retirement expense provisions were so inadequate and reserves so small as to indicate clearly that trouble lay ahead unless corrective measures were adopted. No doubt influenced largely by these conditions, regulatory authority became insistent upon systems of accounts that required depreciation accounting consistent with the forces of reality. Giving effect to this public sentiment, the National Association of Railroad and Utilities Commissioners adopted a new accounting system for electric utilities in 1936. The Federal Power Commission issued a new system effective January 1, 1937. These systems were adopted in whole or with only minor modifications by many state commissions with the result that today depreciation accounting is generally prescribed for electric utilities.

For some utilities the transition from retirement-reserve to depreciation accounting offered no serious problem because the companies were already, in effect, if not in name, on a depreciation basis. In other instances the change to depreciation accounting has already been accomplished. Many utilities, however, are still accounting for retirement losses on the retirement-reserve basis although improvement over previous expense provisions is noticeable. An immediate problem confronting the utility accountant in these situations is the finding of a satisfactory plan for accomplishing the change to depreciation accounting, or perhaps it would be more accurate to say the change to adequate charges for the capital consumed in operations. For whether this consumption is called retirement expense or depreciation expense, there rests on the utility accountant the responsibility of recording the true cost of operations. Sound accounting principles dictate that the consumption of property, as nearly as it can be estimated, should be charged to expense currently. Yet there may be instances where that principle, however sound, may be difficult to follow immediately, or where it might even be unwise to seek to enforce it abruptly. The financial requirements of the instant company and the effect of such depreciation policy on service rates may be important considerations. Where such difficulties are present, perhaps the logical and most reasonable solution is to accomplish the transition gradually so that, over as short a period as is feasible under the circumstances, full depreciation expense charges will be recorded. It is only then that the benefits of sound depreciation practices may be fully realized.

What are these benefits? I shall mention a few with which every student of this subject is familiar.

1. Investors will enjoy greater protection of capital.

2. Additional capital requirements will be more readily obtainable and at lower cost.

3. Reduction of funded debt will be facilitated.

4. Returns on investment will become more stable.

5. Common stock equities will be enhanced in value.

6. Reductions in rates will be facilitated.

Before briefly commenting on these benefits, it will be assumed, as experience has amply demonstrated, that the reserves accumulated will be greater under depreciation accounting than the amounts provided in the past under retirement accounting.

First, let us consider the protection to investors that results from the accumulation of proper depreciation reserves. One of the primary purposes of depreciation accounting is to withhold from net earnings an amount sufficient to prevent any impairment of capital which might result from depreciation of property. By this procedure the assets of the company are conserved and the investor given assurance that his capital, insofar as depreciation may affect it, is intact.

Consider, too, the protection to investors that results from the improvements in financial statements when the facts regarding depreciation are accurately presented. I quote a single phrase that will sound familiar to you all, namely: "The appropriations for depreciation, as determined by the company, have been made upon the basis of charging against income and crediting to retirement reserve an annual amount deemed by them to be adequate to cover retirement losses. These appropriations, however, do not purport to approximate depreciation on the basis of estimated lives of units of depreciable property." This or similar qualifying notes have been appended in many instances to balance sheets and income statements certified by public accountants. It seems to me that such expressions are resorted to in order to say, in involved phraseology that the investor may not comprehend, that the depreciation expense and depreciation reserve of the examined utility are too low. It is significant that, where companies had followed retirement-reserve accounting and had provided adequately for the consumption of investment, such qualifying comments were not appended to financial statements.

I feel safe in saying that accountants generally, whether employed by public accounting firms, commissions, or utilities, do not like to see such qualifying statements in utility reports and equally regret the necessity for them. Also, let me add, when sound depreciation accounting practices are followed, they will become unnecessary and will disappear.

In their place, at least inferentially, it will be shown that the utility has recorded the full cost of depreciation in its accounts as nearly as it could reasonably be estimated; that the provision for this cost has maintained the capital of the company unimpaired insofar as affected by depreciation and has afforded reasonable protection to the equities of investors; and that the returns shown as earned on outstanding securities are correctly stated;

Second, it seems obvious that proper charges for depreciation expense and the existence of adequate depreciation reserves will facilitate outside financing. Such accounting procedure retains funds in the business which might otherwise be improperly distributed in dividends. These funds are usually invested in utility plant and thus constitute an important source of capital. To the extent that additions to plant are so financed, the amount of capital required from outside sources is reduced. It follows that the ratios of outstanding securities to property and of earnings to interest and dividend requirements are improved. With smaller amounts of securities issued against the plant, there is likewise probability of obtaining outside capital on better terms.

The effect depreciation policies may have on the cost of money is shown by a recent reorganization of a utility. This company previously followed the retirement-reserve method. Provisions for retirement expense had been inadequate; in fact, within recent years the retirement reserve was in the red and, in addition, property abandoned was carried as a deferred debit. The interest rates on outstanding bonds were high. One series carried a rate of 8 per cent.

The company was reorganized. Its capital structure was scaled down and certain questionable items carried in plant were written off. In addition, adequate reserves were established and reasonable expense provisions made. Then all outstanding bonds were redeemed with a new 3½ per cent issue sold at a premium resulting in an interest cost of about 3¼ per cent.

The change in depreciation policy of this company was of considerable importance in refinancing at an interest saving. Of course, other factors were also present, but it appears certain that 3¼ per cent bond money could not have been obtained if the red retirement reserve and property abandoned item had been carried forward.

Third, depreciation accounting may improve the financial structure of utilities by facilitating debt reduction programs. This may be accomplished by using depreciation funds in retiring bonds or other interest bearing obligations. If the funds are not needed for construction purposes, perhaps no better use could be found for them than to retire debt. Such a program, if consistently adhered to, will gradually reduce the senior obligations against a given property and earnings and result in even higher grade securities.

Even where, as is usually the case, depreciation funds are used for construction purposes, improvement in debt structure may result. Although such use of the funds does not reduce the outstanding debt or improve the ratio of debt to net property investment, there is a real benefit in that, if depreciation funds are not withheld from earnings and made available for construction, it might happen that the amount of outstanding debt would be increased in order to finance the construction. The practical effect is that depreciation accounting will improve debt ratios whether the funds are used to finance construction or in retirement of debt.

Fourth, the use of depreciation funds so as to lessen the total original issue of debt or in a debt reduction program increases the coverage of interest requirements and the earnings available for common stock. In the long run, then, depreciation accounting operates to stabilize the return on outstanding securities. The experience of American Telephone and Telegraph Company is a good example of such stabilization. For the 35 years, 1900 to 1935, inclusive, that company paid dividends averaging 8.7 per cent on the par value of capital stock and since 1922 a rate of 9 per cent has been in effect. It will not be denied that depreciation accounting so consistently followed by the Bell System was one of the important factors in establishing and maintaining that dividend record.

Fifth, depreciation accounting will aid in obtaining additional common stock equity now needed by many electric utilities. In some instances common stock money is difficult, if not impossible, to obtain. This may be due to a variety of causes, such as insufficient earnings, overcapitalization, thin present equity causing the issue to be too speculative, inability of a holding company to purchase additional stock, or inadequate reserves for depreciation. It is not contended that the accumulation of adequate depreciation reserves is a panacea which will immediately make additional common stock money avail-

able in every situation. However, the plowing of depreciation funds by a utility into additional plant or their use by it in debt reduction programs, will enhance the value of that company's common stock. When consistently followed, that practice will assist in building up stock equities and earnings applicable thereto. In the long run, then, depreciation accounting should permit more common stock financing to be done than has heretofore been possible.

It may be noted, also, that generally the lower the depreciation reserves on utility property, the greater the senior securities which are likely to be outstanding. This may be because if proper recognition is not accorded depreciation, investors are inclined to demand a senior position when they are asked to invest additional funds. Hence, failure to provide adequately for depreciation may create a condition wherein the utility most greatly in need of additional stock equity experiences the greatest difficulties in obtaining it.

Lastly, let us consider the effect of depreciation on the person who pays our salaries—the customer. Will he also benefit? I think so. I am not unmindful of the fact that in some instances the change to depreciation accounting will increase operating expenses over what they were when retirement-reserve appropriations were recorded. This, however, does not necessarily mean increased rates. Other means of recovering the increased expense may be more satisfactory. Load building campaigns have been instituted in many communities. Sales are increasing generally and perhaps still more can be done to increase customer revenue at even lower average costs per kilowatthour and more than cover any temporary increase in expenses occasioned by depreciation accounting. This is at least one expense that should not be affected by the European war situation. Furthermore, utilities have often been allowed adequate depreciation expense in rate adjustment proceedings, even though it was not recorded in the accounts. No increase in rates should be occasioned because that depreciation is now set up in the books. But regardless of any immediate effect on utility rates, either upward or downward, adequate depreciation expense charges should be made by all electric utilities as soon as feasible in order to account for the full cost of doing business and afford proper protection to equities of investors.

I feel confident that such procedure should ultimately benefit the utility customer. Even under the retirement-reserve or other substitute method of accounting for retirement losses, the charges to expense must eventually be as large as if depreciation accounting is followed. This is because, as utility property becomes older, the annual retirement losses tend to increase and when the plant becomes static, will be equal to the full depreciation expense requirement. Under depreciation accounting when this condition is reached, a substantial reserve will have been accumulated, whereas with the retirement-reserve method but a small reserve may exist. Hence, in the long run, depreciation accounting will result not only in no more burden on operating expenses than any other method of accounting for retirements of property but may reduce over-all costs by savings in the cost of money through investment of depreciation funds in utility plant.

Furthermore, the utility which has provided adequately for depreciation is likely to be in better financial condition and may thus better control its operating and capital costs than one which has not done so. It should be better prepared to take advantage of favorable market conditions in purchases of materials and supplies for operation and construction and to adopt more readily those constantly developing technical improvements in the generation and distribution of electric energy necessary for the utility to keep pace with the progress of the art.

It seems reasonable to assume, then, that in the long run depreciation accounting will play an important part in the maintenance of high grade utility service and make possible lower rates than would be probable were the retirement-reserve method continued.

It may be said that although the benefits I have mentioned may be accomplished in theory, yet in actual practice they do not materialize. Some may claim that the depreciation expense will not be permitted to be recovered in rates. They may be concerned also that depreciation reserves will be deducted in determining the rate base. They may be particularly fearful that allowed rates of return on a rate base so determined will be fixed so low as barely to escape the charge of confiscation.

Again, there are those who fear that in one way or another depreciation practices will affect utility customers unfavorably. They may be particularly concerned that claims for adequate annual depreciation allowances will be accompanied by denials of accrued depreciation consistent with the annual provisions.

Where such fears causing mutual distrust between utility and commission representatives exist, effective, economical, and equitable regulation is impaired. The existence of such a situation of itself suggests the remedy.

Although commissions and utilities are frequently thought of as impersonal institutions, the management and the staff of each are composed of persons who are very human in all their characteristics. To dispel whatever feeling of mutual distrust may prevail, frank and honest conduct is required from the representatives of each. A broader cooperation between commission and utility representatives should be encouraged. Such cooperation does not imply that a commission should give "rubber stamp" approval to all that a utility might wish to do, or that a utility need accept all that a commission may direct it to do as gospel and subject to no appeal. Honest differences of opinion are quite natural and should not be resented. Cooperation means putting all the cards on the table; mutual assistance in all relevant and proper matters; accurate and comprehensive presentation and impartial consideration of all material facts; advancement of claims for no more and no less than is honestly believed to be proper; frank discussions of regulatory problems in order to gain the sincere viewpoints of every interested party; and all this to the end that feelings of mutual respect and confidence may be inculcated in both commission and utility representatives, resulting in improvement of regulation in the interest of the public.

With such attitudes prevailing, many of our regulatory problems might be solved. The controversies concerning the treatment of depreciation in regulatory matters might be eliminated. We might well come to the sensible and very practical conclusion that through accountancy we can best measure the financial needs of a utility and give more consideration to required returns on security equities in ascertaining the rates to be charged for utility service. Then the benefits of sound depreciation practices will be realized. Proper depreciation provisions for the protection of capital will be more certain. Returns on securities will be more stable. And the customer will be given greater assurance of the lowest rates consistent with the costs and risks of the business.

The Accountancy of Tomorrow

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An address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 15, 1939

The Haunted Balance-Sheet

ONE of the present tendencies of accounting thought is a greater recognition of the importance of the operating statement or income account as compared with the balance sheet. Statements today are made with less regard to the statement of assets and liabilities of a concern than to its earning power. The earnings are presumed to be reflected by the income account. As a result of this change in viewpoint, the road of development appears to branch into two forks.

One of these relates to the balance sheet. There has been much clamor of discontent with regard to this ancient and honorable financial statement. Some want it to display the present realizable value of the business; some think it should express the capitalization of indicated earning power; others desire it to show the cost of replacement of the entire concern; one enterprising and original critic suggests it should be so set up that the corporate proprietorship should equal the current quoted price for its capital securities.

Developed to perform a certain primary function, it has been criticized for not performing a number of other functions.

Even such an able and intelligent student of accountancy as the present Chairman of the Securities and Exchange Commission in a recent address suggested the hope that perhaps the balance sheet, by slipping behind a columnar screen, and by a swift change of costume, might perhaps be able to play all the parts in the little drama of attempting to present the various viewpoints of the financial condition of a business.

A different line of criticism has to do with what is termed the unreality of a balance sheet in its present-day form. It is alleged that in such statements there is not sufficient recognition of the real, in other words, the present-day, value of assets and that there is included among assets too great a recognition of what has been in the past, rather than what is today. Even the more important assets are carried at what they cost at some distant bygone date rather than at the worth of such assets in today's economic scheme.

Perhaps this line of thinking will prevail in the accountancy of tomorrow, who knows? Perhaps the statement which we now call "Balance Sheet" will, in that future date, be pruned of all but what may be called its live elements so that it will no longer contain any figures measuring assets save those which represent cash or other property measurable in its realizable terms of the day, or legal rights to collect or receive cash or property. Such a statement can evidently no longer be called a balance sheet as it would fail to balance. How far this trend may go I have no way of determining.

In the long run it may be realized that the balance sheet of today, despite the many things it does not do which the business world would like to have it do and the many things it does not show which the business world would like it to show, yet fulfills a needed function justifying its continued existence in approximately its present form.

Courtship of Income and Surplus

I stated earlier that the increasing accent upon the income statement instead of upon the balance sheet resulted in a forking of the road of thought, one road leading toward a possible marked change in the form of the balance sheet, the other toward a change in the manner of presenting the income statement. With regard to the latter there are two schools of thought, the one representing more general practice in the past has attempted to display through the income account for any period the net income or loss effect attributable to that period. Under this method proprietorship changes recognized during the period but applicable to other operating periods have been reflected directly through the surplus account.

Among the more recent agitations regarding accountancy statements is one having to do with the reported engagement of the Income statement and the Surplus Account. The pre-nuptial announcement has been set forth in a statement of accountancy principles sponsored by the American Accounting Association. The advantages and disadvantages of such a union are receiving serious consideration by other accounting organizations and the accountancy of tomorrow may see this marriage consummated.

The advocates of this method of presenting the historical record of financial accomplishments of a business enterprise believe that it is desirable, if not necessary, to reflect in the income account itself all elements recognized during that period as affecting proprietorship, other than contributions or distributions to proprietorship, regardless of the period of operation to which such items may apply. Under a strict application of this method throughout the existence of a corporation the accumulation of the income accounts would display the entire income or loss of that corporation during its history to date. There is much to be said in favor of this method. It is possible that in the accountancy of tomorrow it may be recognized as the preferable method and may be universally adopted. However, it also has its faults.

The chief proponents of the theory that the balance sheet has outlived its usefulness as the primary financial statement base their theory chiefly upon the belief that the earning power of business organizations is of greater interest to all parties concerned than is the static situation presented by the balance sheet. If this be a sound theory, a question arises as to how nearly the reformed income statement just discussed may meet the need. If the income statement includes not only those elements of income and expense or loss directly applicable to the operations of the period, but, in addition, includes all adjustments of income or expense as recorded in past periods, how will it be feasible to gain from it any definite indication of the actual current earning power of

the corporation? Will it not facilitate unwarranted manipulation of the income statement?

Cost—But Whose?

Another unsettled factor in the accountancy of today has to do with the bases of valuation that may be used and which affect both the balance sheet and the income statement. Let me express it this way, even at the risk of shocking you: There is a conflict of opinion as to whether in presenting the financial statements of Corporation A, the basis used shall be measured by the actual monetary consideration or other similar consideration evidenced in the transaction in which Corporation A is a primary party, or whether the valuation shall be on the basis of transactions of a similar nature of *other* corporations, B to Z, inclusive, and to which corporation A has not been a party.

To illustrate, Corporation A pays $2,000,000 for a plant. At a later date it is discovered that corporations B, C, etc., are paying $3,000,000 for similar plants. The process by which this is ascertained is usually known as "appraisal" or "determining present reproductive value." The question is, shall Corporation A continue to display on its balance sheet its plant at what *it* paid for it or shall it substitute the amount which *other* corporations are now paying for similar properties. This affects not only the balance sheet, but the operating statement as well, for many now hold that if Corporation A substitutes the $3,000,000 value in place of its actual cost it must depreciate on that value instead of on cost. In other words, it must now charge in its income account an amount of depreciation equivalent to that charged by corporations B, C, etc.

A fascinating innovation in this line of thinking has been introduced recently by the Federal Power Commission with regard to what is known as "original cost"—not cost to the present owner but cost to some previous owner in the more or less distant past.

Now, it may be that in the accountancy of tomorrow this idea of substitution will hold sway so that in determining the value to be shown for various assets of A and the various amounts to be charged to its income statement, the actual cost of these items to Corporation A will be discarded and, instead, the items will be determined by what competitors are paying for these respective items or what some other previous owner paid for the same assets. This is a trend worthy of some serious consideration.

Even though accountancy has been built primarily upon the basis of actual transactions, the amounts measuring the effects being determined by cost or by the payment of cash or the obligation to pay cash or the equivalent, there have been many deviations from this basic method. Each such deviation has had its advocates who were constantly demanding an increased recognition of some basis other than cost as a foundation of accounting records.

The income account has been little disturbed in the past by any such deviation from cost. The amounts shown for expense have been almost entirely determined by the actual expenditure required of the company in connection with the items noted. There is a trend, however, today to substitute even in the income account a market value or a charge based upon market value in lieu of cost. The chief item at present that has been affected by this deviation is the item of depreciation or other amortization of assets usually grouped as fixed in character.

We can readily picture, however, that if this trend continues the accountancy of the future may disclose an income account in which cost has played but a minor part. Let me illustrate by a single item, "Advertising." Corporation A maintains a radio program and secured what they considered would be an attractive feature at a cost of $1,000 per week under a 39-week contract. The feature proves instantly a tremendous success as a result of which corporation B offers $4,000 a week for the contract. Corporation A refuses to sell but recognizes that on the basis of market value its contract is now worth more than a million dollars which is duly set forth in its balance sheet resulting in a charge of $4,000 per week on their books as the expense of this particular advertising in lieu of the $1,000 of actual cost.

If public utilities are instructed to charge depreciation on the basis—not of cost to them but of cost to some previous owner, may not the trend thus sponsored by high governmental authority be projected farther so that corporations may depreciate machinery for instance not on the basis of its cost to them but on the basis of its cost to the manufacturer who produced it?

Many present-day accountants feel that the financial statements to which they certify can be supported, item by item and dollar by dollar, by the client's records of vouchers, of sales bills, of contracts and of various other documents, supplemented, of course, by judgment as to factors of allocation as between balance sheet and income statement and as between periods of time.

Such accountants might feel less happy if cost as a basic element in financial statements, and by that I mean cost to the corporation whose financial statements are presented, must be superseded by amounts determined by what other corporations have done or are doing.

Other Trends

The subject assigned me is entirely too involved for me to hope to present any adequate treatment for it in the few moments allotted to me. Time does not allow full discussion of the trends I mention as indicating certain possible developments in the future nor even to mention more than a few of these trends. I must leave it to you who listen to picture for yourselves the gain or loss that may result if these trends or any of them develop more fully in the Accountancy of Tomorrow.

Others I should like to have discussed include the effect of reflecting in the financial statements the fluctuating value of the dollar; the attempts to establish uniform systems of accounting; the contradictory demands for simplification of financial statements and simultaneous elaboration of the information contained therein; the future place of the Independent Certified Public Accountant; the economic advantage of accounting terminology as a code-language of business and the necessity for the mastery of the code on the part of the receiver as well as the sender of the financial message; and numerous others pertinent to the subject.

I also wish that I were able to properly draw your attention to the possible economic significance of the present philosophy as to charges against capital surplus and against earned surplus, keeping in mind the relation of capital surplus to capitalism and the relation of earned surplus to wealth distribution and living standards. This one philosophy may have a marked bearing on Accountancy tomorrow.

Government Control

In considering what the accountancy of the future may be, recognition must be given to the possibility of a control being built up through government bureaus to an extent that would overshadow any form of control by the

profession. There has been already more or less experimenting in that line in this country. Uniform accounting was established long ago by the Interstate Commerce Commission. Further experiments in such attempts at uniformity are being made by the Federal Power Commission and by public service commissions in many states. It is possible that in the ensuing years there may be such a growth of bureaucratic control over all forms of industry that accountancy will be completely shackled by it in such manner as to allow no freedom of discretion or of judgment. Such a result I cannot believe will be attained or if it is attained that it will endure. I am still sufficient of an optimist to believe that truth ultimately will prevail and truth cannot be bound by rule or law. In addition, bureaus of governmental nature seldom, if ever, represent equitably all interests. They usually are created in such a manner that they function primarily for the benefit of a group or a class.

I cannot therefore believe that bureaucratic control of accountancy can ever produce true results unless through a bureau which is wholly non-partisan and without class or group favoritism. Even assuming such a bureau, it is inconceivable that accountancy can be so docketed and pigeon-holed that rules may be enacted which will in all cases produce true results. Dealing with accountancy involves as many complicated elements as dealing with human behavior. Accountancy is concerned with a phase of practical application of economics. If the time comes when economics can be reduced to a science built up by continuous series of logical steps founded about self-evident axiomatic truths, then perhaps accountancy may also be similarly established in scientific form so that true facts may be determined in all circumstances without the exercise of judgment or discretion. Perhaps in that may lie the accountancy of tomorrow. Who knows?

This thought may lead us into a further fancy. Machines of remarkable ingenuity have been devised to accomplish automatically almost everything that can be determined or performed without the exercise of judgment. Therefore if accountancy should ever reach that phase of exactness, why is it unreasonable to believe that there might be evolved a magnificent auditing and accounting machine? The records of a corporation would be fed into the hopper and from one slot would come a balance sheet and from another an income statement, with perhaps additional slots for analyses of surplus and other supplementary schedules, all perfect in their accuracy and completeness, thus relegating accountants to the scrap heap of innocuous desuetude.

Since we are in the realm of fancy, why stop there? If we are forecasting, let us do it in a big way. One of my interesting clients has evolved a system whereby anything susceptible of newspaper reproduction, type, pictures, cartoons, or what have you, may be fed into a transmitting machine and simultaneously, through receiving machines, tuned to the proper wave length, there will be reproduced perfect copies of the original, no matter where these receiving machines may be located. Many of you have already seen the results.

Let us combine those two pictures so that in the accountancy of the future the corporation having completed its fiscal year and fed its records into the auditing machine I referred to, now feeds the resultant financial statements into a transmitting set and stockholders throughout the country tuning to the proper wave length of their favorite corporation may see the balance sheet, the income statement and all other interesting data, including the president's report, come streaming forth from their receiving set which may have been placed upon the breakfast table beside the electric toaster.

Government, however, can be of great aid in the development of a better Accountancy—not by attempting to make rigid classifications for items that are innately variables nor by limiting optional treatments where optional choice is essential to fair presentation of facts or for the preservation of essential rights, but by cooperation with the profession and supplying a needed authority in the application of those theories and practices determined as being productive of the best results for the whole economic community.

Great progress in such cooperation has resulted from the work of the Securities and Exchange Commission, particularly under its Administration as now constituted. Further progress will undoubtedly be made as the Commission and its staff increase their understanding of accounting problems and their recognition of the sincerity of the profession in its attempts at equitable solutions.

Conclusion

I cannot state how the various problems of accountancy of today will be solved in the future, nor how its shortcomings may be corrected. Could I do that I would not have to wait until tomorrow. Nor can I tabulate the misconceptions applicable to present-day accountancy, and how such misconceptions may be overcome, nor list those elements in financial statements which by some are held to be misrepresentations. That which is misconceived or misunderstood today may be understood tomorrow, but who knows what new misconceptions or misrepresentations may tomorrow be held with regard to accountancy as it then may be. We cannot hope that accountancy will be the one single phase of complicated life which at any time in the future will be free from misconceptions and misunderstanding.

Accountancy, like any other important factor in commerce of economy is not without its critics. If we who practice accountancy are not aware of its faults, its shortcomings, its failure to attain perfection, that fault can not be laid to the door of those outside the profession. Their freedom in voicing their viewpoints has not been limited by any inhibitions nor handicapped by any embarassment.

One of the ironies, perhaps I should say one of the tragedies, of life is the miscasting of roles whereby men are not allowed to follow the line of operations with regard to which they know so much. This is well manifested in connection with accountancy. Consider the tragedy and the loss to the business world in the fact that those most prolific and most vehement in their written and spoken expressions of what is wrong with accountancy and what should be done to correct it have never been permitted by an unkind fate to certify to a set of financial statements nor even to make an audit. Perhaps this unfortunate situation may be adjusted in the future so that these critics may be recast in new roles wherein they can perform instead of discuss.

As accountants tremendously concerned with the improvement of the professsion, we have welcomed and will continue to welcome all these criticisms and suggestions and regardless of their source we must weigh them carefully in the hope that somewhere among them and perhaps from an unexpected source may come some idea that can be evolved into a practical plan for improvement.

Cost Accounting Practices in Federal Government Departments

By H. S. Bennion

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An address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 14, 1939

OUR national government, now more than one hundred and fifty years old, has become a vast organization carrying on large and varied enterprises.

During most of its existence these enterprises, except for the Postal Service, were primarily non-commercial in character. Revenues from their operations were trifling and incidental and were simply covered into the Treasury as miscellaneous receipts. Expenses for operation and ordinary maintenance, for occasional replacements and for additions and betterments of plant and equipment, all were provided for in considerable detail by annual appropriations from Congress. A dollar spent from funds gathered by the tax collector or from borrowed funds, whether this went for rations for the Army, for constructing Post Office buildings, or for digging canals, was merely a dollar spent, and the accounting, from the time it was appropriated until the final auditing of the expense voucher, was solely concerned with insuring and proving the fact that the money was actually spent in accordance with the stated purpose in the appropriation act and that cash balances and incidental cash receipts had been handled according to laws and regulations designed to discourage misuse of public funds by their custodians.

Article I of the Constitution of the United States says: "No money shall be drawn from the Treasury but in consequence of appropriations made by law and a regular statement of accounts and receipts of all public moneys shall be published from time to time." This provision has largely determined the practices of the various bureaus and other agencies of the government in accounting to Congress for the funds disbursed by them.

Government accounting is essentially a cash accounting system. It is full of checks designed to prevent irregularities in the handling of cash. It is in effect a body of regulations springing from a long series of legislative enactments to control the action of paymasters with no idea of any presentation of the actual worth of a business enterprise in which the government may be engaged or of its solvency. It presumes that a new supply of money will annually be made available from the Treasury and the accounting concerns itself almost entirely with funds received and disbursed in each current year.

Private corporation accounting is essentially an accrual accounting which concerns itself primarily with earnings on previous capital expenditures and with the integrity of these investments.

The Comptroller and Budget Officer of the Post Office Department, in testifying early this year before a subcommittee of the House Committee on Appropriations, said with reference to Post Office accounting:

"We have none of the complexities which are concerned with capital funds, interest, payables, receivables, credit, inventories, sales, purchases, intangibles, insurance, taxes, banking, securities, markets, distribution, dividends and profits. Ours is a simple cash set-up with a huge volume and without bookkeeping adjustments—and that's all it is."

On the same occasion he said:

"The present money is being appropriated in conformity with the Act of July 2, 1836. In 1836 the accounting structure of the Post Office was established on its present basis. It was then under the guidance of Postmaster General Kendall and it was done to cure a very unsatisfactory situation."

What has been accounting practice of Federal Bureaus for so long a period may be expected to continue through the years. The habits and practices and inherent characteristics of the Congress and of government bureaus are deep rooted and resistant to change. Customs will persist with little permanent modification and, if diverted from their course by some incident, will tend to drift back in time. New Federal agencies may be expected to gravitate toward the customs and practices of the older agencies.

Commercial Operations

Many of the enterprises undertaken by the Federal Government in more recent years are commercial in character, requiring not only the operation and maintenance of extensive plant and equipment, but involving the transacting of commercial business—establishing prices, promoting and soliciting business, collecting revenues and actually incurring all of the expenses of private business enterprise, except taxes. Some of these expanding enterprises of the Federal Government are competing directly or indirectly with private enterprise to influence or establish price levels in such commercial fields as banking, insurance, building, contracting, engineering, railroading, shipping, electric power supply and, to a limited extent, manufacturing. A brief examination of the accounts rendered by these commercial enterprises of the Federal Government reveals, however, that the old style government accounting—merely keeping track of cash receipts and disbursements, is still the general practice of these governmental commercial enterprises in reporting to Congress.

Since the electric light and power industry is one of those affected by government in business, it may be worth the while of its accountants to look briefly at the accounting practices of the Federal Government to observe the basic differences between such practices and those of private business so as to be in a position to appreciate more fully what to expect from their competitor in the coming years.

In reviewing the various annual reports of Federal agencies to Congress, one is impressed with their lack of uniformity both as to form and substance. The lack of information makes it difficult, for the layman at least, to gain an understanding of the financial operations reported upon. Additional accounting

information may often be found by searching through testimony of officials before appropriation committees of Congress, by reference to reports of the Secretary of the Treasury and of the Director of the Bureau of the Budget, and by searching through miscellaneous speeches, articles and publications, but a clear and comprehensive statement generally is not to be had.

The magnitude of Uncle Sam's business establishment is indicated in an address on the accounting system of the Federal Government by E. F. Bartelt, Commissioner of Accounts and Deposits, United States Treasury Department, before the National Association of State Auditors, Controllers and Treasurers, on November 16, 1938, in which he pointed out that the government then employed over 1,200,000 men and women, that it had about 400,000,000 acres of real estate having an estimated fair market value of $5,000,000,000, that it maintained 2,900 buildings, that it owned equipment the value of which it would be difficult to estimate. It had bonded indebtedness of $38,000,000,000, a cash balance of $2,500,000,000, exclusive of the $2,000,000,000 stabilization fund, that it had a proprietary interest of about $4,000,000,000 in various governmental corporations whose combined assets were more than $12,000,000,000 (an amount equal to the investment of the privately owned electric utilities). He stated that the government had over 9,000 revenue and appropriation accounts and approximately 6,700 disbursing accounts, that it handled 25,000,000 collection items annually and made 140,000,000 payments annually. It had 25,000,000 accounts with taxpayers, 2,000,000 accounts with owners of government bonds, 700,000 loan accounts with the Farm Security Administration, 33,000,000 accounts with employees subject to the Social Security Act, that the Home Owners Loan Corporation had in excess of 1,000,000 accounts, that the Veterans Administration had 1,500,000 accounts, and the Farm Credit Administration and affiliated agencies had approximately 4,000,000 accounts.

Business enterprises of the Federal Government which involve engineering, operation and management of extensive plant and equipment, and the collection of large revenues as well as the payment of expenses, are the Postal Service, the Reclamation Service, the Panama Canal, Inland Waterways Corporation, The Alaskan Railroad, the Tennessee Valley Authority and the U. S. Housing Authority. The following are a few observations based upon a brief examination of the annual reports of these agencies.

Post Office Department

Post Office buildings are constructed by the Treasury Department in accordance with appropriations of Congress. Disbursements for lands and buildings are merely recorded in the current account of expenditures of the Treasury Department. The operation and upkeep of post offices and charges for rented post office space are provided for in current expenses of the Post Office Department, but funds expended for Post Office Buildings are not treated as an investment in plant for a commercial enterprise of the government, the revenues from which should carry its fixed charges, and the reported deficits of the Post Office Department do not include any fixed charges for government owned post office buildings or for capital invested in equipment owned by the Department.

The Post Office Department is allowed to retain its postal receipts and to disburse these funds together with annual appropriations which are made by Congress to make up the annual deficit between income and outgo. The Comptroller and Budget Officer of the Post Office Department, in the testimony previously referred to, stated:

"For 1937, the Comptroller General certified the postal income as $726,201,110, while the actual was $870,186,238. The 1937 expenditure was certified to be $772,815,842, while the actual was $827,309,310. Some of the discrepancy is in millions paid without appropriations, deducted from earned income. *Net income is reported and expense is not reported at all. Certain income is ignored.*

"If the law or ancient custom allows us to collect or pay moneys from any source for any purpose and not include those moneys in our income and expense, it is wrong if we are to run the Postal Service in a businesslike manner."

The Bureau of Reclamation

The Reclamation Service was established in 1902, and its expenditures to bring arid lands under irrigation were to be repaid by the settlers on the projects. The funds appropriated by Congress were to be treated as a revolving fund to be invested in new projects as the earlier ones paid up. Its consolidated statement of construction costs of irrigation works and other items reimbursible, with construction and amounts repayable for the fiscal year ended June 30, 1938, as set forth in the Annual Report of the Secretary of the Interior, shows a net operating loss for the year which is added to expenditures for construction during the year, and this sum is in turn added to the previous amount repayable to show the grand total amount carried as repayable. The account does not reckon interest or other fixed charges.

Having in mind the fact that an operating deficit is shown, that interest and other fixed charges and apparently that general administrative costs of the main office of the Bureau at Washington are also excluded, it is interesting to observe that in the Interior Department Appropriation Hearings for 1940 the Bureau of Reclamation reported that for the fiscal year ending June 30, 1938, the cost of incidental power developed at ten projects of that Bureau, with a combined generating capacity of 100,000 kva and an annual output of about 502,000,000 kwh, was only 1.09 mills per kwh; the principal elements of this cost fixed charge, not having been included.

Boulder Dam

The Boulder Canyon Project, although built and operated by the Bureau of Reclamation, is reported separately because of the fact that it was built under a separate Act of Congress which contained a number of specifications concerning the sale of power and the handling of revenues therefrom. No income statement for this project is shown in the report of the Bureau of Reclamation but the Annual Report of the Secretary of the Treasury shows the condition of "Colorado River Dam Fund." The report for 1936 (page 105) states:

"This fund was established under the Act of December 21, 1928, to provide for the construction of works commonly referred to as the Boulder Canyon Project. All revenues received in carrying out the provisions of the act are payable into the fund and expenditures are made out of the fund, under the direction of the Secretary of the Interior.

"Of the $165,000,000 (maximum advances by the Treasury) an allocation of $25,000,000 was made to flood control. Under an opinion of the Attorney General, funds advanced for the construction of the All-American Canal are not subject to interest charges.

"The Secretary of the Treasury is required to charge the fund with such amounts as may be necessary for the payment of interest at the rate of 4% upon all amounts advanced and remaining unpaid (except money advanced for construction costs of the All-American Canal) and if the fund is insufficient to meet the payment of interest, the Secretary of the Treasury may, in his discretion, defer any part of such payment *and the amount so deferred shall bear interest* at the rate of 4% per annum until paid."

As of June 30, 1938, the Colorado River Dam fund showed total advances for construction of $112,669,735 and

accumulated interest of $19,872,146, against which there stood a credit of $2,825,632 as net proceeds, repaid to the Treasury from the sale of power. Payment of the net interest of $17,046,514 was deferred for one year. This deferment costs the fund additional interest of $681,861, which is more than one-third of the power revenues for the fiscal year 1938.

No depreciation charges enter into the accounting. The expenditure was supposed to be liquidated at the end of fifty years. In 1938, however, when the electrical installation was about half completed, the total annual interest charges were $4,943,425, or three times the revenue from the sale of power for that year. In 1939 the interest charges will be almost $6,000,000 under the present arrangement with accumulated arrears more than $20,000,000, and revenue for 1939 was estimated at the 1939 hearings before the House Committee on Irrigation and Reclamation as $5,000,000. Mr. E. F. Scattergood, Chief Engineer of the Los Angeles Light and Power Board, appearing before this committee, stated in July, 1939, that Boulder Dam is destined to fall short of "paying out" in 50 years as was expected unless there is an adjustment of rates and charges at the dam. He further stated that to hold markets and encourage industries, those who contracted for Boulder Dam power should be given a lower rate at the present time as proposed in the Bill, otherwise the Boulder project might not reach its expected earning power.

Panama Canal

The Panama Canal enterprise collects revenue from tolls and also from the operation of a large number of business undertakings, such as an electric utility system, coal and oil business, telephone and telegraph systems, real estate operations, hotels, dairies, merchandising, shipping, etc. The Panama Canal makes one of the most complete reports of any of the Federal business enterprises. In its report to Congress for 1938 it shows a capital investment of about $538,000,000, revenues from canal tolls of $23,305,000, and revenues from its business operations of $17,941,000.

The gross revenues from canal tolls were covered into the Treasury as "miscellaneous receipts," as required by law, and the operating profit of the business enterprises amounting to $824,612 was likewise covered into the Treasury as miscellaneous receipts, as the law requires. The Canal in turn received from Congress for maintenance and operation, sanitation, civil government, postal service, repatriation of unemployed aliens, etc., certain appropriations, and spent during the fiscal year approximately $9,396,000.

The report calculates that the earnings, both from the Canal and the business operations, for the year, amounting to $14,735,000, represented a return on the net investment (gross investment less depreciation) of 2.9 per cent. It reported that net repayments (gross less current appropriations) to the Treasury since the beginning have amounted to $272,176,000.

If the Canal had accounted as a private enterprise, assuming 2.6 per cent rate of interest on the capital investment of $538,000,000, which was the average interest rate paid by the Federal Government during the fiscal year, 1938, and deducting $2,248,000 as accrued depreciation on the canal and equipment and business property as estimated in the report, the net income for 1938 would have been $14,735,000 minus $16,236,000, or a net deficit of $1,501,000. Out of the gross revenue, private enterprise would have had to contrive to pay some $10,000,000 to $15,000,000 in taxes to local, state and Federal Governments.

The point to observe here is that the Panama Canal is reckoning up the time when its cost will be defrayed but using operating profits before charging for interest and depreciation. Thus, in the course of fifty years or so, it may show that the Treasury has been repaid, whereas if it were currently charged with the interest which the Treasury is regularly paying out, and if it were currently charging its depreciation, it might never produce sufficient earnings to make any repayment.

The omission of depreciation from the calculations is excused on the grounds that the cost is to be repaid in a certain number of years, but if the actual cost is not repaid in a reasonable number of years then this reason is not valid and depreciation should be charged.

The Alaskan Railroad

The Alaskan Railroad operates from Seward on the seacoast to Fairbanks on the Yukon. It does the usual railroad business. Operating revenues and non-operating income are shown, as well as operating expenses and collections from the operation of ocean-going vessels. The "total income in excess of expense" was reported to be $76,704 in 1938. No receipts were covered into the Treasury. Reports of rehabilitation and improvement and extension indicate that this is being done with WPA and PWA funds. From the report it is evident that fixed charges on the capital investment are not reckoned in the accounting.

Inland Waterways Corporation

The Inland Waterways Corporation operates in the Mississippi River and tributaries and in the Black Warrior River. It does a shipping business and its plant consists of towboats and barges, wharves and terminals. It began during the World War and has expanded somewhat since that time. It purchased the equipment of its principal competitor in the river shipping business. Its operations are in competition with railroad and truck transportation and some remaining privately owned river transportation.

Without attempting to go into its history of appropriations received, at present it is organized as a corparation whose entire capital stock of $12,000,000 is owned by the Federal Government. In 1938 it reported total operating revenues of $8,086,000, total operating expenses of $6,959,000, non-operating income of $125,000, deductions from gross income of $147,000, net income before depreciation $1,105,000, charges for depreciation of $600,000 and net income after depreciation of $505,000. This amounted to 4 per cent on the capital stock. It made no payment of dividends to the Treasury which holds the capital stock.

Tennessee Valley Authority

The Tennessee Valley Authority, created in 1933, owns and operates a number of generating stations, an extensive transmission system and some distribution plants. It also engages in the fertilizer business, soil conservation, forestry and river improvement for navigation and flood control. Its appropriations and bond authorizations together with the appropriations, prior to its creation, for the building of Muscle Shoals and Sheffield steam plant amount to $390,600,000. In its reports to Congress it has allocated a large part of its expenditures to navigation and flood control. It does not account for interest on its investment in facilities allocated to power production. It makes certain limited payments to the states of Tennessee and Alabama in lieu of taxes. In its cost allocation report on the Norris, Wheeler and Wilson Dams it estimated that the earnings from the sale of electric power at these three dams would return their entire cost in thirty years.

It is authorized by law to retain its revenues and expend the funds so collected in its operations.

Its accounting of costs is not comparable to the full accounting of electric utilities as prescribed in the Uniform System of Accounts, the principal items of difference relating to accounting for capital expenditures and to fixed charges thereon—interest, depreciation and taxes.

U. S. Housing Enterprises

About twelve agencies of the Federal Government are engaged in the business of building, operating or financing apartment houses and other types of dwellings. Some of these are merely underwriting and financing operations but others involve ownership and management of housing properties. These managed properties involve the fixing and collection of rents, the matter of operating and maintenance expenses and of depreciation. The published annual reports furnish operating data for a year or more on a few of these owned and operated housing projects.

The reports submitted to Congress merely give a summarized statement of revenue from rents and of operating expenses. Funds to make up the deficit between revenue and expenses are provided from funds appropriated to the U. S. Housing Authority or its predecessor, the PWA Housing Division, and those projects which had operating profits paid this to the U. S. Housing Authority. There is no reckoning of interest or other fixed charges on the capital expenditures set forth in the published financial statements.

In its annual report for 1938, the U. S. Housing Authority, in discussing PWA Housing Division projects, states that rents for these projects were to be fixed "to operate or lease the projects on a basis which contemplated *repayment to the government of 55 per cent of the cost of the project over a sixty-year period, plus interest.*" The report also states that the U. S. Housing Authority "is authorized to fix the rentals at amounts necessary to pay management, operating and maintenance costs plus such other amounts as are consistent with maintaining the low-rent character of the projects."

Self-Liquidating Projects

In reporting on the operations of the Boulder Canyon Project the Department of Interior has reckoned that the project will pay for itself in fifty years, and the special board appointed to make an allocation of the investment in Norris, Wheeler and Wilson Dams has reported that the earnings from the sale of power at the three dams would return their entire cost in thirty years. Early this year, in reporting on the feasibility of the cost of the Florida Canal Project, the engineers are quoted as having said that the government would get its money back without interest in the course of time. In the light of these statements and the annual reports of various revenue producing Federal business enterprises, it is apparent that the term "self-liquidating" in the parlance of government finance means that over a period of years operating revenue from the projects shall sufficiently exceed operating expenses that the aggregate sum of the operating profit will finally equal the amount of the appropriations for the projects.

Private enterprise with operations of precisely the same character would perforce reckon its self-liquidation status only after paying interest on dividends to its investors and providing from the actual revenues of the projects for reserves for replacements and retirements in sufficient amounts to prevent the physical property from depreciating more than about 10 per cent so as to insure at all time acceptable service standards, and it would, of course, have to take out of its cash drawer exactions of the tax collector in support of government. In the matter of paying back the capital outlay over a long period of years, private enterprise could not enjoy the cumulative effect of escaped taxes, which at present rates would itself wipe out the entire cost in about twenty-five years.

Over-All Costs

The Federal Government, in conducting commercial enterprises, actually has to meet all the elements of expense that private enterprise encounters except the one of taxes. (Indirectly it has that expense also in competitive fields for it must forego the tax revenues which its property would have to pay into the Treasury were such property in private hands.) The government has accrued a public debt of approximately $40,000,000,000 and it annually pays interest on this public debt in excess of the total annual Federal budget for any year prior to 1917. This Federal debt is in very large part the result of the entry of the Federal Government into these many business enterprises to which I have referred. The capital outlays made for them and the accumulation of the failures of these enterprises to return to the Treasury in annual revenue amounts equal to its outlays, direct and indirect, on their behalf must add up to a large percentage of the debt.

The various business enterprises already referred to are merely departments of the one large business organization, and we should look to the accounts of the Treasury Department as the central accounting system of the Federal Government for a general balance sheet and income statement. Unfortunately, however, the Treasury merely accounts for receipts, appropriations and expenditures and does not furnish any detailed reckoning which would give a measure of the true return on investment of any of the individual enterprises in which the government is engaged. There is no single set of books which reflects all of the financial transactions of the government. The books of the U. S. Treasury are inherently cash books and the annual report of the Secretary a record of cash receipts and cash disbursements. There is no attempt to present a consolidated balance sheet of assets and liabilities. It merely provides a list of the securities owned by the United States, the details of the public debt and the cash assets on hand.

If there were a consolidated balance sheet and income statement which would show the proper allocation to individual business enterprises of the government, two large items of expense not included, or rarely so, in their accounts to Congress would become manifest, namely, the large item of interest charges and substantial charges for general or overhead expense. To state this in another way, the reports of expenditures of the various individual departments and agencies of the government if all added up would fall substantially short of the total expenditures shown by the U. S. Treasury because of their failure to reckon a proper share of interest and of general or overhead expenses.

Some of the reports of these governmental commercial undertakings may present calculations aimed to show the success of the business after allowing for interest, depreciation, perhaps taxes and possibly amortization, but these presentations are merely studies and in no sense records of cash transactions or of accrued charges to be paid out of revenues from the business. Governmental commercial enterprises and truly self-liquidating projects should pay a reasonable annual rate of interest and make a rea-

(*Continued on page* 568)

The Closing Address

By P. S. Young

Chairman of the Executive Committee, Public Service Electric and Gas Company

Closing address before the Third National Accounting Conference, Edison Electric Institute, Chicago, Illinois, November 15, 1939

IT is a pleasure for me to participate in this program of the Third National Accounting Conference of the Edison Electric Institute which is now about to close.

On behalf of Mr. Rodey and his Planning Committee, I thank the accounting associations, the American Institute of Accountants, the Controllers Institute of America, and the Accounting Section of the American Gas Association, who have combined with the Edison Electric Institute to make possible this most interesting and successful gathering.

The program has been unusually complete. It is obvious that in conferences of this nature, the accomplishments are measured by the contributions of the participants. Leading accountants in the industry and outstanding representatives in fields closely related to activities of utility accountants have made it notably constructive.

The electric utility accountants have aspired, through these Conferences during the past few years, to know more accurately and completely the facts that underlie the operation of the business, the comprehension of which determines the success of their service to the industry. In this effort, I believe, they are developing that knowledge and understanding which is the basis of sound business conduct.

The accountant is no longer merely a recorder of financial facts. He has become an interpreter of such facts. Today, the trained accountant has become an important part in the conduct of modern business enterprise. He is indispensable in the utility field, with its multitudinous problems presented by taxation, regulatory rules, valuation and rate determinations, issuance of securities, and financial reports, not to mention the volume of operating and statistical data so necessary to present-day operating efficiency. The manifold operations of the commercial departments of utilities outside of the sales departments, are largely accounting functions. The utility accountant is closely associated with the utility engineer in the operation of utility properties. With increased influence and opportunity the accountant, serving as a counsellor of management, faces increased responsibilities. No longer can he wait for management to assign specific tasks or to point out all its problems. He is obligated to his organization, his profession and to himself to keep resourcefully abreast of business demands and also to anticipate them. The utility accountant of today must have a broad foundation in training and education as well as a technical knowledge of accounting. With this fundamental preparation he is in a position properly to employ his talents to assist in the duties of management.

The utility accountant, generally speaking, is not overspecialized. In the earlier stages of the business and during its rapid growth he has had the widest opportunity to familiarize himself with every phase of the business.

Must we not depend upon the accountant to speak with authority on matters with which he is familiar? Should we not rely upon him to speak for his company in matters of economic portent? Furthermore, should he not be expected to take a militant position in every movement leading to the just solution of problems affecting the economics of business and social development?

The discussion of depreciation has brought out clearly the sound contributions being made by some of the best men in the utility accounting field. The recent depression brought in its train innumerable reforms, social experiments, and corrective measures which have presented many problems for business generally and also for the accountants of this industry. Throughout these conferences, we have witnessed the progress that has been made in charting the course to be followed even though we may have been so far unable to arrive at the solution of all of these questions. You, who are veterans in the service of the industry, will recall other difficult problems in the past requiring time, earnest deliberation and sound judgment for their solution, but progress has been made and the industry is on its way to greater service and new achievements.

I should like to associate myself with the note of caution against rigid and inelastic rules and regulations for utility accounting which has been sounded here. Much has been done during the past few years to establish the fact that accounting practice is founded very largely on business requirements and so affected by custom and judgment. The American Institute of Accountants, the New York Stock Exchange and The Securities and Exchange Commission have done an outstanding service in clarifying this important point for accounting in general practice today. Every accountant in the utility industry should take part in the necessary work of education on this point.

In concluding, may I say that I recognize the value of the discussion and exchange of ideas resulting from the committee work and periodic meetings of the accountants of the industry. The delegates in attendance here will find this work a valuable adjunct in the training of the personnel in their respective companies. The need for these Conferences has been well demonstrated by the great interest of all who have taken part in these meetings the past few days.

A high standard of discussion has been maintained throughout these meetings. A firm purpose has been evidenced to strengthen the industry by the application of sound accounting practice, to protect the investor, and the public, by honest and intelligent presentation of the economic and financial facts relating to the business. I am sure that all of us in attendance here will return to our respective duties better equipped to grapple with the problems that are facing us. We will all carry in our memory, and be the richer for, this experience.

Personally, and on behalf of all the delegates at these meetings, I wish to thank Mr. Rodey, his associates, the Planning Committee, and the Special Committees for this splendid Conference.

I now declare the Third National Accounting Conference closed.

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EDISON ELECTRIC INSTITUTE 420 Lexington Avenue, New York, N. Y.

Attendance Record Established By Electric Utility Exhibits at New York World's Fair

Will Reopen in 1940

By Clayton Irwin
Managing Director, Electric Utilities Exhibit Corporation

WHEN the New York World's Fair closed on October 31st, more than 12,250,000 people had seen the electric utility industry's two exhibits, "Forward March of America" and "The Electrified Farm," the highest attendance record of any industrial exhibitor at the Fair, and exceeding by more than 250,000 what had been considered by some as a rather optimistic estimate of 12,000,000 people made at the half-way point of the Fair.

Even taking the attendance of the two exhibits separately—7,000,000 at "Forward March of America" and 5,250,000 at the Farm—the exhibits still rank among the best attended industrial exhibits at the Fair.

The question most frequently asked, particularly during the first few months of the Fair, was: "Are people from the rest of the country coming to the Fair, or is the attendance confined largely to 'Easterners'?" We had the answer to that question so far as our own exhibits were concerned in the first month's operation—and what was true of our exhibits must have been true of the Fair as a whole. At the end of the first month, an analysis of the cards signed by visitors at our exhibits for copies of the souvenir booklets showed that we had requests from every state in the Union except one. This did not necessarily mean that we had not had visitors from that state, since only a small percentage signed cards for the souvenir booklets. The day following, however, we had signed cards from the one missing state.

Since then there have been enough impartial surveys made of the Fair as a whole to prove conclusively that the country *did* come to the Fair. In our own exhibits, the more than 350,000 cards for copies of the souvenir booklets are a tangible evidence that from every nook and corner in the United States

MR. IRWIN

people came to the Fair. In addition, we had approximately 15,000 requests from Foreign visitors—from Canada, England, Palestine, Argentina, France, Yugoslavia, Bulgaria, Mexico, Germany, Australia, Scotland, Ireland, Italy, South Australia, Turkey, Spain, Sweden, Arabia, Holland, Netherlands, India, Ireland, China, Brazil, Sweden, Cuba, in addition to Hawaii, the Philippines, the Panama Canal Zone, and many others. Another evidence that it was a World's Fair in every sense of the word!

The attendance at an exhibit is, of course, an excellent index of its showmanship. More important, if possible, from the point of view of the exhibitor, is the *effectiveness* of the exhibit—whether it succeeds in achieving its objectives. In the theater, if a show is a box-office success, the show *is* a success. An exhibit, however, can be popular, have good attendance, and still be a "dud" because it fails in its objective. The acid test of an exhibit, therefore, is whether it achieves its objective . . . and showmanship . . . first to attract and then to interest.

From the point of view of showmanship, our exhibits have established themselves as a pronounced success. There is ample evidence for this statement. Our attendance record is one evidence, the wide publicity given them is another, still another is their listing as "Must See" exhibits in newspapers and magazines all over the country, also their listing as "shows" and "spectacles." In his excellent article on "The First 100 Days of the Electric Utilities Exhibits at the New York World's Fair," appearing in the August BULLETIN, Mr. Gardner Boyd has given this phase of the exhibits considerable attention and there is no need for going into detail at this time.

The question then is: "Are the exhibits achieving their objectives?" Mr. Boyd answers this question definitely in the affirmative in his article.

Because the answer to this question is the answer to whether the exhibits are worth while to the industry and to the companies which are supporting them, a careful study has been made of the newspaper and electrical trade paper comment, and articles in general and class magazines which have appeared.

In an article entitled "Utility Showmanship at the New York World's Fair," appearing in the September 28th issue of *Public Utilities Fortnightly*, Ralph B. Cooney, appraised the various utility exhibits at the Fair, and his remarks on our exhibits are so pertinent and typical of other comment that I am quoting them in full:

"A constant stream of visitors pours into another building devoted to the electric utilities—the fascinating 'Forward March of America' display of the nation's light and power companies. Here again is one of the most talked-about attractions of the whole fair.

"Contrasting a brilliantly conceived city street of the gas-light era with a brilliantly illuminated street of tomorrow, it achieves by this juxtaposition the sharp contrast which is the essence of drama.

"To appreciate this, it is only necessary to station yourself for a few moments on the modern side of the doors that connect the two contrasting streets. The 'ohs' and 'ahs' with which the crowd unfailingly emerges into the bright modernity of the 'street of tomorrow' are quite sufficient evidence of the sharpness with which the magic power of electricity has been revealed.

"Both streets are so well executed that, by themselves, each would provoke interested attention. The crowd lingers longer in the old-fashioned street, partly, I believe, because of the extra human interest provided by the presence of living characters, partly because it is so different from the world in which we now live.

"This is probably just as well, for since the big moment with most visitors comes as they suddenly find themselves on the bright side of the doorway, any straining to hold their interest as they stroll on down the ultra-modern street would be anticlimactic.

"According to the announcements, the 'Forward March of America' display has been sponsored by 'Your Electric Utility Company.' Its purpose is to show the changes in living conditions that have been brought about since the introduction of electric service through the agency of privately owned utility systems. At the same time, it seeks to imply that the future development of an 'electrified' society may also be entrusted to these same organizations.

" 'Forward March of America' is a successful exhibit. People come from it with a renewed understanding of what it means to live in a world brightened by electric light. I have spent more time in this place than in any other single spot at the fair. . . . I have observed the reactions of several hundreds of people.

"The other exhibit of the electrical companies consists of a pleasantly unpretentious demonstration of an electrical farm. It is characterized by a quiet, sensible quality that carries great conviction.

"Whoever picked the agreeable young men and women who demonstrate the farm's equipment possesses a personnel sense of the highest order. These young people are tops.

"They exude a feeling of genuine friendliness; they smile as though it didn't hurt; they do their work with expert yet casual skill. They talk easily and with assurance, but with no trace of that brassy commercial patter so characteristic of the usual demonstrator. They strike just the right note in the presentation of a pleasant picture.

"I have overheard a number of discussions between visitors and members of the demonstration staff. The thing that impressed me most was the simple common sense with which explanations were given, particularly when practical questions of installation and construction were involved. It was so evident that the demonstrators fully understood rural people and the extent to which farm families build things for themselves.

"The chief virtue of the electrical farm as a display lies, I think, in the fact that it keeps functioning as a farm —producing eggs and milk and garden truck, just as though all America wasn't wandering through the barnyard.

"Within the scope of its quiet objectives, the electrical farm is creating an excellent impression. It appeals to city people as well as their country cousins, and, while seldom jammed, it invites a constant procession of visitors. Of course some of them think it 'awfully cute' and some are disappointed because the electrification hasn't produced something spectacular like neon tubing around the cow stalls. But to the many who have some understanding of farm life and farm problems, its remarkable array of conveniences stimulates an appreciative interest. One only has to listen to the high percentage of intelligent questions asked to be convinced of this."

From articles in two leading electrical trade papers:

"Constructive imagination and careful planning have given to the electric utilities' exhibits at the New York World's Fair a wide range of interest combined with effective visitor appeal."

"Impressive from the educational standpoint is the presentation of the Electric Utilities Exhibit Corporation, sponsored by leading electrical utilities throughout the country. This exhibit dramatizes the progress with electric service by contrasting a full-sized reproduction of two business streets—the Street of Yesterday and the Street of Tomorrow.

"The street of the gay nineties is complete to the minute detail. Upon entering the building Mary and I were transported to the scenes of half a century ago. We walked through the lobby of an old-time theater surrounded by bill posters announcing melodramas of a bygone era. Narrow sidewalks, cobblestones, a clanging horsecar, and a maze of overhead telegraph and power wires created a nostalgic atmosphere.

"You were mistaken when you suggested that I make this Fair alone. As an engineer, I am possibly more interested in the wheels behind the wheels that make this Fair go. But, not so with Mary. She appreciates more than I what these electrical exhibits mean to her. Her attitude is the same as hundreds of our women customers who will tour these fairgrounds. To her and to them this Fair broadens their appreciation of science and electric service.

"For instance, as we walked through the Street of Yesterday, I saw a smile creep over her face. She watched a woman scrubbing her clothes over an old washtub aided only by a tin boiler on the coal stove. In the old barber shop an 1892 model flapper was having her hair dried with a palm leaf fan. Those are the things that make the womenfolk sit up and take notice. I almost believe that Mary's estimation of me and the work we are doing at the company went up 100 per cent after we left the flickering gas lighted street and emerged from a curved passageway into the office of the modern electric company. . . ."

These are typical of hundreds of others and if they are a criterion, I think we can safely say that the exhibits are achieving their objectives.

One interesting fact has emerged from our experience at the Personal Service desk where signatures were taken for the souvenir booklets. In addition to their own names and addresses, visitors were asked to fill in the name of the electric company serving them, so that cards could be sent to their respective companies. More than 80 per cent of the people did not know the name of their company!

We have had so many requests for additional information on our experience in this connection that I am including it here. Specific information on individual companies is not available.

"Residents" of Street of 1892 in "Forward March of America" Say Farewell at Close of New York World's Fair for 1939

After the first few weeks' operation, when it became evident that a large proportion of visitors did not know their company's name, we recognized the importance of a survey to determine actual percentages.

Accordingly our staff made a number of two-day and three-day tests, and these tests, coupled with the breakdown of the cards themselves, showed definitely that not more than 20 per cent of the people who requested booklets knew the name of their electric company.

This situation did not hold true, however, in some of the larger cities, or where the company had publicized initials. Also people seemed to remember better names with "Edison" in them, and the shorter company names. The General Electric Company and Westinghouse were not infrequently given as the name of their electric company. In a number of instances the name of a company in a contiguous territory was given, and company names which were made up apparently on the spur of the moment because people did not know, or could not remember, and were too embarrassed to admit it.

This gives rise to many interesting speculations which have no bearing on the exhibits, as such. It is reported here only because it is an interesting and surprising fact, and because of the many inquiries we have received.

While both exhibits "sold" the value of electric service and its importance in our present day world, the technique employed in the two exhibits were quite different. In "Forward March of America" the contrast in the two streets did what might be termed a "mass selling job" in the selling of an idea. The impact of the contrast brought home to visitors the tremendous progress in living standards in the short space of less than fifty years and electricity's contribution to that progress. At the Electrified Farm, however, the selling was more direct, more specific. More than half of the 60,000 people who requested souvenir booklets on the Farm also requested information on the various appliances, equipment, etc., and these names have been sent to the various manufacturing companies so that they could furnish the information.

The exhibits have been "put to bed" for the winter and will open again in 1940. If the 1940 period is as successful as the 1939 period has been, there is no question but that the exhibits will have done much to give the American public a new conception of what electric service means to them; and a better appreciation of the privately operated utility companies furnishing that service.

Meeting of Meter and Service Committee

A. B. Craig, *Chairman*

ON Sept. 20, 21 and 22 members of the Meter and Service Committee gathered at the Hotel Leland, Springfield, Illinois, for the first meeting of the 1939-1940 season. All members of the Committee, together with a number of corresponding members and guests, turned out to enjoy a most interesting session. About 34 were present, representing practically all sections of the country.

Springfield is the home of the Sangamo Electric Company, and the program of the first day, September 20, was arranged by officials of this company. The day was devoted to an inspection of the Sangamo plant, where many novel and interesting methods of meter manufacture were exhibited. The Committee welcomed the opportunity of visiting the plant and appreciated their hospitality.

On Thursday morning, September 21, the business session was opened and the Committee engaged in active discussion of various metering problems. A number of subject groups reported on projects being actively studied. Among those of most outstanding importance were the following:

(1) Revision of the Metermen's Handbook

All metermen are awaiting with interest the publication of the revised Metermen's Handbook. This arduous undertaking has been in Committee for the past two years and is now in its final form in the hands of the printer. The revised edition is expected to be ready for distribution early in 1940.

(2) Standardization of Current Transformers for Primary Circuits

Following completion of the development of a low voltage current transformer about a year ago, this subject group was organized to make a similar study to obtain a long range current transformer for primary circuits. This work has advanced to where preliminary specifications are now prepared for consideration. The purpose of this study as taken from the preliminary draft is quoted below:

"The increased overload range of modern watthours meters and the limited available overload range of the present day current transformer indicates the desirability of having a longer loading range of current transformers. This will permit reduction of necessary stocks to be carried by both the manufacturers and the utilities, and less frequent changing of current transformers as load changes occur."

Per Cent of Total Meters Manufactured in Sizes and Types Indicated

*Compilation of Manufacturers' Reports**

Meter Cap Amp.	Bottom Connected or "A" Type								"S" Type					
	2 Wire				3 Wire				2 Wire			3 Wire		
	1925	1930	1935	1938	1925	1930	1935	1938	1930	1935	1938	1930	1935	1938
5	69.4	47.36	25.83	16.10	9.3	8.59	7.35	2.65	...	15.59	17.88	...	4.25	7.65
10	17.1	8.27	1.92	0.33	4.2	7.64	2.63	0.08	...	0.78	0.16	...	0.92	0.12
15	....	3.38	5.07	5.46	...	14.76	17.18	17.67	...	1.82	3.28	...	14.21	27.91
25	....	0.86	0.13	0.02	...	7.69	1.25	0.17	...	0.01	0.00	...	0.46	0.09
50	....	0.17	0.05	0.04	...	1.15	0.31	0.22	...	0.01	0.01	...	0.23	0.16
75	....	0.05	0.00	0.00	...	0.08	0.00	0.00	...	0.00	0.00	...	0.00	0.00

Comparison by Size

Meter Cap Amp.	1925			1930			1935			1938		
	2W	3W	Total	2W	3W	Total	2W	3W	Total	2W	3W	Total
5	69.4	9.3	78.7	47.36	8.59	55.95	41.42	11.60	53.02	33.98	10.30	44.28
10	17.1	4.2	21.3	8.27	7.64	15.91	2.70	3.55	6.25	0.49	0.20	0.69
15	....	...	....	3.38	14.76	18.14	6.89	31.39	38.28	8.74	45.58	54.32
25	....	...	....	0.86	7.69	8.55	0.14	1.71	1.85	0.02	0.26	0.28
50	....	...	....	0.17	1.15	1.32	0.06	0.54	0.60	0.05	0.38	0.43
75	....	...	....	0.05	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00
	86.5	13.5	100.00	60.09	39.91	100.00	51.21	48.79	100.00	43.28	56.72	100.00

Comparison by Type

Meter Cap Amp.	Bottom Connected or "A" Type				"S" Type	
	1925	1930	1935	1938	1935	1938
5	78.7	55.95	33.18	18.75	19.84	25.53
10	21.3	15.91	4.55	0.41	1.70	0.28
15	....	18.14	22.25	23.13	16.03	31.19
25	....	8.55	1.38	0.19	0.47	0.09
50	....	1.32	0.36	0.26	0.24	0.17
75	....	0.13	0.00	0.00	0.00	0.00
	100.0	100.00	61.72	42.74	38.28	57.26

*Averages are not weighted, that is manufacturers data treated as if all manufactured same amount of meters for corresponding year.

(3) Standard Dial Constants

The Committee has given considerable publicity to the Dial Constant Standardization, a copy of which was published in the February, 1939, issue of this bulletin. Effort is being made to have this standard thoroughly understood in order to obtain acceptance and conformance to it. In view of the advancement in metering, particularly in regard to the extended overload capacity of modern meters, the formula on which these standards were established seems reasonable and necessary. The Committee reaffirmed its agreement in the fundamental principles on which these standards were based.

(4) Metering of Low Power Factor Loads

During the year a survey was made in regard to the proper metering of low power factor loads, such as fluorescent lighting and neon signs. It was the definite opinion of the Committee that much could be done to require manufacturers of such equipment to apply power factor correction to their product. It was believed that more emphasis in this direction would provide a much more satisfactory solution to the problem than to attempt to use the necessary expensive metering to measure such loads on a KVA basis.

In connection with the standardization of meter sizes, a compilation made in 1936 of the per cent of total meters manufactured by size and type has been revised and brought up to date by the inclusion of the 1938 figures. These data show a definite trend toward the acceptance of the recommended standard sizes of 15 and 50 amperes. The outstanding fact of this analysis is that in recent years there has been a pronounced increase in the demand for the 15-ampere size. For example, in 1930 18% of the total meters manufactured were 15 ampere, in 1935 38%, and in 1938 this figure had increased to 54%. Activity of the Meter and Service Committee in the past year in furthering the standardization of sizes, together with the equalization of the price of the 5 and 15 ampere meters, has given added impetus toward the establishment of the 15 ampere size as the standard domestic meter.

It is also interesting to note, aside from the standardization of sizes, that there has been a marked increase in the manufacture of 3-wire meters with corresponding decrease in the 2-wire type. In 1925 only 14% of the total meters manufactured were the 3-wire type; in 1930 this increased to 40%; and in 1938 56% were 3-wire meters.

Other projects of general interest now being investigated are:

(1) Determination of experience with Service cable and to obtain cable specifications suitable for both service drop and service entrance use.

(2) Investigation to obtain a more suitable material for meter terminal blocks which will not be subject to tracking between terminals.

(3) Determination of the value and need of potential indicators in watthour meters and whether or not they could be eliminated either entirely or partially with a resulting reduced meter cost.

As is customary at these meetings, the following day, Sept. 22, was given to a joint session with the AEIC Committee on Metering and Service Methods and the meter manufacturers for discussion of problems of mutual interest.

Domestic Electricity in Great Britain

From an article by H. A. Shackleton in *Electrical Review* (London)

"RELIABLE particulars of domestic consumption in Great Britain have been very difficult to obtain in the past, but the latest Return of the Electricity Commission contains some very useful information concerning domestic electrification. Included for the first time is a Summary Table which gives an analysis of consumers and sales of electricity to, and revenue received from, domestic consumers. Similar information for the United States has been published annually for many years, so that a more reliable comparison of development in the two countries is now possible.

"It should be mentioned that the table does not cover the whole of the domestic consumers in Great Britain, information being available only for 92.8 per cent for 1937-1938. Figures in the following tables have therefore been adjusted where necessary on the assumption that the undertakings included in the Return are characteristic of the whole."

EDITORS' NOTE: In the following tables, the figures for Great Britain cover the year ending March 31, 1938 for the most part, while those for the U.S.A. are for the calendar year ending Dec. 31, 1937. In Table 1, the two items marked* have been inserted by the E.E.I.

"The rapid increase in number of domestic consumers in Great Britain during the past two years has been attained mainly through the connection of a large number of consumers of the low wage earning class. Quite apart from the present abnormal situation, the rate of connection will inevitably fall in the future, since a large proportion of the premises near distribution lines have now been connected.

"Using the estimates of numbers of appliances in use, . . . it appears that the annual consumption per domestic customer in Great Britain was 100 kwhr more for cooking, 73 kwhr more for water heating and 170 kwhr *less* for refrigeration than in the U. S. A.

"The most striking difference in connections in the two countries is in the field of refrigeration. In the U. S. A. there was one domestic refrigerator to every 2.4 domestic consumers, whereas in Great Britain, there were approximately 77 consumers for every domestic refrigerator in use.

"Our advantage in supplying more energy per consumer for cooking and water heating was, therefore, almost nullified by our smaller sales for refrigeration purposes.

"For lighting and miscellaneous uses the consumption per consumer was 197 kwhr in Great Britain and 349 kwhr in the United States. . . . The conclusion is, therefore, that much more extensive use is made of electric lighting in American homes than we over here are accustomed to make."

TABLE 1. NUMBER OF CONSUMERS, 1937

	Great Britain	U.S.A.
Population	46,000,000	129,257,000
Domestic Consumers	8,091,000	21,698,000
Consumers per 1000 population	176	168
(Area, square miles*	94,638	2,973,776)
(Customers per square mile*	85	7)

TABLE 2. ANNUAL CONSUMPTION, 1937

	Great Britain	U.S.A.
Average Number of Consumers	7,713,000	21,276,000
Kwhr consumed	4,623,900,000	16,875,500,000
Annual Use per Consumer	599	793

TABLE 3. APPLIANCES IN USE, 1937

	Great Britain		U.S.A.	
Appliance	Saturation	Kwhr/Appliance	Saturation	Kwhr/Appliance
Flatirons	75 %	60	84 %	80
Radios	60 %	80	85½%	100
Refrigerators	1.3 %	300	43½%	420
Ranges	14½%	1,200	6½%	1,200
Water Heaters	5 %	2,500	2 %	3,300

Empire State Association Convention

OVER two hundred executives and department heads of various gas and electric utilities met at the thirty-fourth annual convention of the Empire State Gas and Electric Association at the Westchester Country Club on October 19th and 20th.

Edward P. Prezzano, President of the Association opened the convention with a splendid address in which he indicated the value of association activities and the fruits of cooperative effort.

Conrad N. Lauer, retiring President of the American Gas Association, delivered an inspiring talk on the gas industry's future and spoke of the contribution to that industry and to the management of the American Gas Association made by men from the Empire State.

Hall M. Henry, Assistant to the President of the New England Gas and Electric Association, spoke on Increasing the Gas Net Revenue, in which he indicated that not only operating economy but predominantly sales effort was the key to success. With illustrated charts he emphasized the various steps in increasing revenue.

Dr. William I. Myers, Head of the Department of Agricultural Economics at Cornell University, spoke on The Outlook for Agriculture in New York State and its possible bearing on the sale of electrictiy to farm customers.

Davis M. DeBard, Vice-President of the Stone & Webster Service Corporation, spoke on Load Building, in which he emphasized the importance of market analysis and the necessity of the gas and electric industries getting a just share of consumer income.

Charles W. Kellogg, President, Edison Electric Institute, spoke on electric utility finances. He reviewed the history and present financial structure of the electric utility industry.

A splendid talk on recent amendments to social security legislation was given by Timothy J. Mahoney, Counsel of the Borden Company.

Herbert C. Davidson, Vice-President of the Consolidated Edison Company of New York, spoke on recent developments in accounting regulation. He commented upon the great good to be had by cooperative effort, both state and national, in ironing out the points of controversy before regulatory orders are finally imposed.

Hon. Milo R. Maltbie, Chairman of the State Department of Public Service, was unable to be present because of illness and in his place, Hon. Gay H. Brown, Counsel of the Public Service Commission spoke on the responsibilities of the Commission in giving to the public the true and actual facts when the industry is scurrilously and unjustly attacked by demogagues. He condemned such attacks on honest utility management.

Dr. Virgil Jordan, President of the National Industrial Conference Board gave a splendid address on the business outlook.

Clarence L. Law, Vice-President, Consolidated Edison Company of N. Y., was General Chairman of the Convention.

Afternoons were devoted to golf for the men, with bridge and motor trips for the women. Many of those present visited the World's Fair.

On Thursday evening the entire convention went to the New York World's Fair where a dinner and entertainment were thoroughly enjoyed.

At a meeting of the Association's Executive Committee held on September 21, 1939, the following officers were re-elected: President, Edward P. Prezzano, president, Westchester Lighting Co.; Vice-president, Irving K. Peck, president, Binghamton Gas Works; treasurer, Herbert C. Davidson, vice-president, Consolidated Edison Co. of N. Y., Inc.; secretary, George H. Smith.

The Managing Committee was elected as follows: Edward P. Prezzano, president, Westchester Lighting Co.; Irving K. Peck, president, Binghamton Gas Works; Ernest R. Acker, president, Central Hudson Gas & Electric Corp.; Joseph P. Haftenkamp, vice-president, Rochester Gas & Electric Corp.; Charles A. Tattersall, secretary, Niagara Hudson Power Corp.

Wisconsin Association Meetings

MORE than 450 attended the meetings of the Electric, Commercial and Technical Divisions of the Wisconsin Utilities Association held at Milwaukee, Nov. 6 and 7. A full program covering current utility problems was presented. President Bruno Rahn reviewed the encouraging utility situation in Wisconsin. H. J. Morton presented the developments in code wiring. Fred E. Eriksen stressed the need and the value of utility advertising if it is supported by action and attitude of management and employees.

Pointing out the increases in cost and the delay in getting rate adjustments during the World War, C. W. Kellogg, president of the Edison Electric Institute, suggested that utilities now cooperate with commissions to get flexible rates agreed upon at this time. He suggested that a surcharge be made on each bill for fuel or labor increases of 10 per cent over 1937 base costs on each property and that adjustments of the same type be made for tax changes. He also suggested the desirability of early agreements to enable automatic adjustments in each six-month period in the event major costs increase in the near future.

Rural electrification held attention, with a complete exhibit of electric uses and equipment on the farm as a feature. Prof. F. W. Duffee urged utilities to take a careful look at rural electrification, pointing out that the tractor had taken over most of the power field and that the home and general farm service, on the whole, could be held as a major marketing possibility only if the purchasing power of the farmer is increased. He pointed out that electricity uses on a farm were luxuries in the sense that the farmer could and had done without these conveniences in the past and the question was to give him electric service that would make him money or advance his purchasing power so that he could afford electrical conveniences.

A session on lighting laid especial stress on the new fluorescent lighting, with W. N. Aldrich discussing equipment and C. T. Bremicker applications. The problems and opportunities in school lighting were presented by H. W. Schmidt of the state educational department.

A plan aimed at shortening interruptions by storms of electric power and telephone lines in Wisconsin was announced at the meeting. Based upon a report and recommendations of a committee headed by R. G. Walter, the plan contemplates mutual aid of all utilities in the state in restoring service in affected areas. It will be the first of its kind of a state-wide scope.

Electric utilities, as part of the plan are to install short wave emergency radio to maintain communication in event of telephone and telegraph wire trouble. Until the electric companies have their own emergency radio, they will fall back upon such a radio system planned by the Wisconsin Telephone Company, though it will be preferable

to avoid relaying messages through a third party.

The emergency pooling service is expected to be available also to companies operating rapid transit trains in interurban service so that passengers may not be stalled too long by breaks in power lines.

To avoid delays in furnishing emergency help that may occur through negotiations over rates of wages and costs of material for supplying the help, the plan provides that the help would be sent at once and the matter of cost be discussed later.

While some details remain to be worked out, the mutual aid of men and equipment to repair storm damage is expected to be in effect by the start of winter.

The new standards for transformers were presented and caused a favorable discussion. G. M. Hunt of the U. S. Forest Products Laboratory talked about pole preservation through treatment and said experience showed that a good creosoted treatment with inspection would obtain a satisfactory product. He held that other treatments were as yet in a developmental stage.

Make Use of Records

Service records should be used to get more economy or better service and not to fill files, in the opinion of H. A. Calberg of Wisconsin Public Service. He stressed the elimination of records that could not be put to use.

Proper loading of distribution transformers was discussed by A. G. Pergande of Wisconsin Electric Power and showed that the proper rating for a given load could be fixed by use of maximum demand and a factor obtained by test.

Much new data on lightning were presented by K. B. McEachron of General Electric. Photographs and oscillograms at Pittsfield and on the Empire State Building showed lightning to be similar to a d-c arc with a relatively long discharge period and perhaps a dozen peak values of current in a given discharge. A preliminary streamer from cloud to ground was followed by arcing from ground to cloud, with variable current values during the discharge period and current magnitudes largest at the ground end of the discharge path. These new data will greatly influence equipment design and line protection.

Service Rules

How each company can tie into the work of the Modern Kitchen Bureau was discussed by W. C. Stephenson. How to sell refrigeration, commercial cookery and other appliances were topics presented by specialists of manufacturers, and R. A. Rich of General Electric talked about the competitive fuel situation.

Some changes in service rules are being developed for Wisconsin and the status of this project was presented by E. J. Kallevang. C. L. Turner discussed employee education and training. J. A. Potts of Wisconsin Electric Power pointed out the advantages and disadvantages of four-wire secondary systems and J. E. Wise of the Wisconsin Industrial Commission pointed out the effects of large capacity socket appliances on present wiring practices. Recent trends in meters were discussed by C. P. Stahl.

All the meetings were well attended and reports from all sections indicated that Wisconsin utilities are busy serving increased loads and endeavoring to improve service and economy. Round-table conferences on lighting, rural electrification and power sales brought out good discussions and several special papers on safety, use of radio for trouble crew dispatching, line noise levels and joint use of poles were presented. All present voted the meeting a great success.

Southeastern Sales Conference

MORE than 200 advertising and sales executives, engineers, supervisors and department heads, representing the leading electric utilities of ten Southeastern states met at Atlanta, November 2-4, for a general sales conference of the Southeastern Electric Exchange.

C. A. Collier, vice-president of the Georgia Power Company spoke on the advantages of a long-range sales program. He stressed the importance of merchandising plans which were based on estimates of three, four and five years ahead, rather than plans merely designed for a single fiscal year. The Georgia Power Company's own merchandising "Five-Year Plan" was presented as an example.

Charles E. Ide, vice-president and general manager of the East Tennessee Light and Power Company and president of the Southeastern Electric Exchange spoke on the problems of today's sales executives, faced with mounting quotas and a greater need for economy. "What many sales executives would call 'temporary conditions,'" Mr. Ide told the conference, "are in reality 'permanent conditions.' We must realize that quotas that we believe to be almost impossible will be replaced by even larger ones in future campaigns."

Other speakers who addressed the conference were S. P. Vecker, general sales manager of Carolina Power & Light; Wells M. Stanley, vice-president Alabama Power; W. J. Amoss, general sales manager New Orleans Public Service; Henry N. Cassell, Southeastern representative of the Dale Carnegie Institute; A. G. Garrigues, director of retail sales of Philadelphia Electric; C. W. Stuart, manager of the home bureau of General Electric; R. H. Fite, Jr., sales department head, Ebasco Services, Inc.; W. F. Ogden, commercial engineer with Edison General Electric Appliances; E. M. Clapp, manager of the power sales division of Georgia Power, and W. A. Moore, vice-president Mississippi Power & Light.

The lighting committee meeting was featured by addresses by Howard Phillips of Tennessee Eastern Electric Co., speaking on "Home Lighting"; Henry J. Morton, Detroit Edison, on "New Wiring Materials and Methods"; J. F. Whitehead, Georgia Power Co., on "Proposed Code Changes Affecting Commercial Lighting," and H. M. Horton, General Electric Co., on "Fluorescent Lamps and Other New Light Sources."

Other speakers on the lighting program were T. D. Hoskins, Louisiana Power & Light Co., speaking on "Successful 'Low Use' Customer Sales Activity," and Walter Wildeman, Westinghouse Lamp Co., who spoke on "Lighting Load Builders."

Presided over by C. M. Kilian, advertising manager of the Alabama Power Co., the advertising and sales promotion committee meeting was featured by a talk by E. K. Hartzell, assistant to the general manager, East Tennessee Light & Power Co.

Mr. Hartzell, president of the P.U.A.A., told the committee of a new plan of the association to exchange advertising ideas and to make the art-work of one company available to the others in the association.

Cost Accounting Practices in Federal Government Departments

(*Continued from page* 558)

sonable annual amortization payment on the full cost of the undertaking to the Federal Treasury including overhead. This should be an actual cash payment, not a paper transaction, and during the period when earnings do not cover operating expenses plus interest and amortization charges the deficiency should be added to the amount upon which interest and amortization are to be paid. Only by such a requirement could government accounting of its business profits take on real significance. If this were the practice it would result in relieving the taxpayer somewhat of his burden and would enforce more care by government agencies in proposing and urging capital expenditures on the ground that they would pay their way. It would be much fairer to private enterprises which are struggling to make their business pay and yet compete with their government. Actually, to be fair to them, commercial enterprises of the government should also make payments into the Federal, state and local treasuries in lieu of taxes.

Such a course, however, can scarcely be expected. It is more reasonable to assume that the Federal Government will generally follow its traditional accounting practices of disregarding fixed charges on capital outlays and that it will reckon and report as profit on its commercial enterprises any favorable differences between gross revenue and operating expenses, and its rates, tolls, rents, etc., in general will be based on this accounting practice. Any payments into the Treasury will be called a profit and expenditures, however large, on behalf of the projects will be forgotten in a year or so, though the taxpayers may be paying interest on the debt incurred and paying off the debt itself for years thereafter.

In the light of what has been said, it is obvious that economies in operating costs are to become more and more important to the wellbeing of private enterprise. If given half a chance, private enterprise succeeds in competition with government enterprise through its greater initiative and efficiency. The accounting of electric utilities is closely controlled and prescribed by both state and Federal regulatory authorities, and the tendency of this regulation is to make accounting more and more detailed and elaborate, but somehow the resource and ingenuity of private enterprise must contrive to meet the necessities and requirements for providing accounting information and at the same time curtail accounting expense. It can truly be said that real progress in this direction is being made and the purpose and duty of the Accounting Committees of the Institute are to develop and disseminate information relating to the best accounting achievements to be found throughout the country to the end that this favorable progress may continue.

CONVENTIONS AND MEETINGS

NOVEMBER

6-7 Wisconsin Utilities Association, Electric, Commercial and Technical Divisions, Schroeder Hotel, Milwaukee, Wis.

13-15 Third National Accounting Conference, Edgewater Beach Hotel, Chicago, Ill.

DECEMBER

4-5 Prime Movers Committee, EEI, Philadelphia, Pa.

4-9 American Society of Mechanical Engineers, Philadelphia, Pa.

JANUARY

12-13 Louisiana Engineering Society, St. Charles Hotel, New Orleans, La.

17-20 American Society of Civil Engineers, New York, N. Y.

22-26 American Society of Heating and Ventilating Engineers, Cleveland, Ohio.

22-26 American Institute of Electrical Engineers, New York, N. Y.

22-26 American Society of Refrigerating Engineers, Cleveland, Ohio.

22-26 National Warm Air Heating and Air Conditioning Association, Cleveland, Ohio.

FEBRUARY

4-8 National Electrical Manufacturers Association, New York, N. Y.

5-6 Prime Movers Committee, EEI, Detroit, Mich.

12-13 Electrical Equipment Committee, EEI, Netherlands-Plaza Hotel, Cincinnati, Ohio.

JUNE

3-6 EDISON ELECTRIC INSTITUTE, Atlantic City, N. J.

Organization for Maintenance of Continuing Property Records

(*Continued from page* 544)

regulatory requirements. In this department should be engineers to check the reports received from the field and to verify the completion report by an inspection of the finished work; but I believe that the maps, records, sketches, and other similar records should be maintained in the engineering department cross referenced to the completion work order reports rendered to it.

The financial bookkeeping incident to the records would naturally be maintained in this new division of the accounting department. There are many signs to indicate that the work will eventually resolve itself to that. In this manner, accounting and engineering information will be correlated, overlapping and duplication will be avoided to a great extent, and in cooperation with the engineering department as a harmonious whole the record will be valuable and available for the guidance of the engineering and operation departments.

One function of the accounting department has always been to have currently available to all departments information for use in the conduct of the business.

The accounting officer is responsible to management and board of directors for a correct rendition of the financial transactions, many of which, under the new conception of plant accounting, will be incident to plant changes.

I believe therefore that it is a self-evident truth that if any part of cost procedure and accounting is divorced from the responsibility of the accounting department, the accounting officer cannot be responsible for the financial statements as a whole.

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